

# **GUIDANCE ON THE GROUNDWATER REGULATIONS 1998**

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**Department of the Environment, Transport and the Regions**





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## INTRODUCTION

1. This Guidance has been prepared to explain the purpose, contents, scope and, where appropriate, implementation of the Groundwater Regulations 1998. The guidance is for use in England and Wales, although a view may be taken in due course on the need for separate guidance for Wales. There will be separate guidance covering Scotland.
2. Draft Groundwater Regulations were published in January 1998 for public consultation. The accompanying consultation paper explained the reasons for the Regulations and the provisions proposed in the draft Regulations. Following public consultation conducted between January and April 1998, the Groundwater Regulations were made on 6 November, laid before Parliament on 11 November 1998, and came into effect fully on 1st April 1999.
3. The Regulations are an environmental protection measure which complete transposition of the Groundwater Directive (80/68/EEC) and provide enhanced protection for groundwater. Under the Regulations the Environment Agency has responsibility for the enforcement of the Regulations, and decisions on their scope and effect. The provisions of the Regulations are additional to existing systems regulating discharges to water, which remain in force.
4. Under the Regulations it is an offence to do any of the following:
  - a. cause or knowingly permit the disposal, or tipping for the purpose of disposal, of any List I or List II substance in circumstances which might lead to its introduction into groundwater, without (or in breach of) an authorisation under regulation 18;
  - b. cause or knowingly permit an activity to be carried on contrary to a prohibition or authorisation under regulation 19;
  - c. contravene an authorisation under regulation 18 or 19.

These constitute offences under s85 of the Water Resources Act 1991 and therefore the defences in s88 of that Act will apply. All disposals of the type mentioned at (a) above require prior authorisation by the Agency, coupled with a requirement for prior investigation before such disposals can be authorised. An authorisation is defined under Regulation 1 as:

an authorisation under Regulation 18 or 19;

a discharge consent with the meaning of section 91(8) of the Water Resources Act 1991;

an authorisation under Part I of the Environmental Protection Act 1990 in

relation to a process designated for central control under section 2 of that Act,

a permit under the Pollution Prevention and Control (England and Wales) Regulations 2000 in so far as it authorises the operation of a Part A installation or Part A mobile plant within the meaning of those Regulations, or

(in Scotland) a discharge consent under Part II of the Control of Pollution Act 1974.

5. The Regulations place a duty on the Environment Agency to protect groundwater, in effect by prohibiting discharges of List I substances to groundwater, and preventing pollution of groundwater by List II substances. These requirements, including prior investigation, apply to all discharges to groundwater, including those authorised under the existing requirements of the legislation mentioned in paragraph 4. The regulations also empower the Agency to issue Notices which may prohibit, or impose conditions on, activities other than disposals which could result in an indirect discharge of listed substances to groundwater. This is in addition to existing notice powers aimed at preventing pollution of controlled waters, in particular sections 161 and 161A of the Water Resources Act (s161A being an amendment made under the Environment Act 1995).
  
6. The Regulations allow the Agency to make cost recovery-based charges as required under the Environment Act 1995. These charges are part of an amended charging scheme described in the Agency's "Charges for Discharges Scheme", which may be reviewed annually on 1 April but which has been amended for the time being under the Action Plan for Farming initiative.

## SECTION I

### SCOPE OF THE REGULATIONS

#### *Regulation 1 - Citation, extent, commencement and interpretation*

#### *Regulation 2 - Exclusions from the Regulations*

#### *Regulation 3 – Discharge of functions*

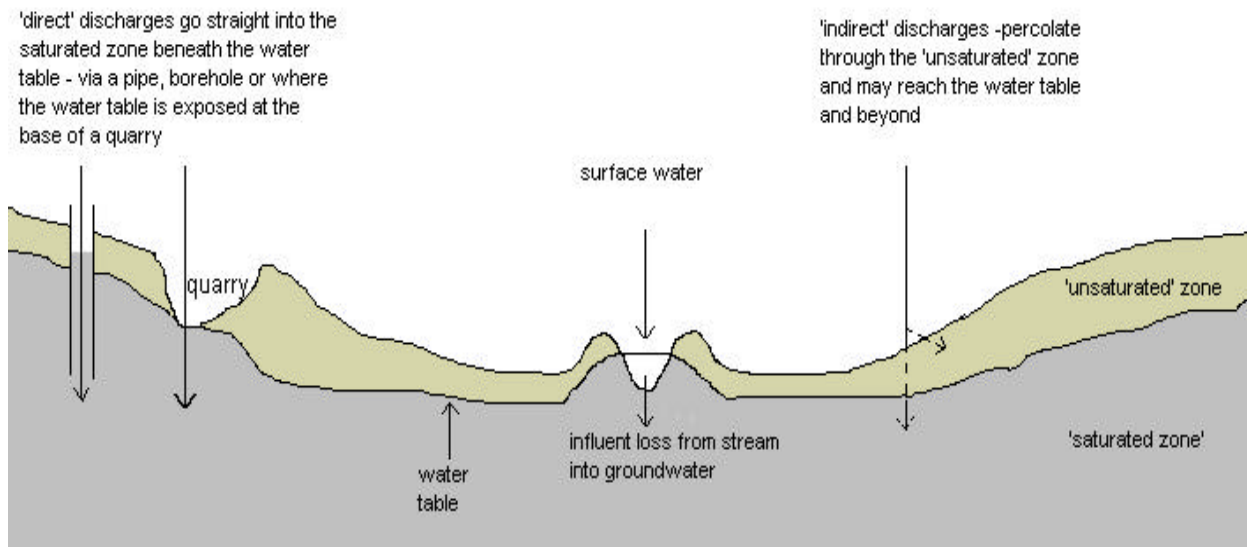
#### *Definition of List I and II substances*

7. The Regulations apply to England, Wales and Scotland. Parallel Regulations apply in Northern Ireland (The Groundwater Regulations (Northern Ireland) 1998).

#### **Regulation 1 - Coming into force of the Regulations**

8. The Regulations came into force, as prescribed in **Regulation 1**, as follows:
  - a. on 2 December 1998, Regulations 1 and 16. These are essentially technical provisions. Regulation 1 sets out the commencement provisions, and defines the terms used in the Regulations. Regulation 16(1) empowers the Agency to make the charges which are necessary under the Environment Act 1995 in order to recover the costs of administering applications for authorisation;
  - b. on 1 January 1999, Regulation 23. This sets out the transitional arrangements which applied between 1 January and 1 April 1999 when applications for existing disposals were deemed to be authorised until otherwise disposed of by the Agency;
  - c. on 1 April 1999, the remainder of the Regulations.
9. With regard to definitions, Regulation 1 defines groundwater as "all water below the surface of the ground in the saturated zone and in direct contact with the ground or subsoil" (see diagram below). This definition is taken from Article 2(a) of the Groundwater Directive (80/68/EEC). The definition of "ground waters" in s104(1) of the Water Resources Act 1991 relates to "any waters contained in underground strata". This includes water in the interstices of the ground, subsoil, or strata ('porewater') and, therefore, any water travelling from the surface via the 'unsaturated zone' to the 'saturated zone', below the water table. Although this Water Resources Act definition appears to be wider than the Groundwater Directive definition, in practice discharges to the saturated zone can only be

controlled if there is also control over discharges to the unsaturated zone. Therefore the two definitions are not inconsistent.



10. The Regulations control both direct and indirect discharges to groundwater. An indirect discharge means the introduction into groundwater of any substance following percolation through the ground or subsoil. A direct discharge is one without percolation, straight into groundwater.
11. The Regulations deal with groups and families of substances which belong to Lists I and II, and which are set out in the Schedule to the Regulations. Specific requirements for the control of List I and List II substances, and the distinction in this respect between them, are set out at Regulations 4 and 5. Paragraphs 14-28 below provide further detail.

### **Regulation 2 - Exclusions from the Groundwater Regulations 1998**

12. Regulation 2 provides that the Groundwater Regulations do not apply to the following discharges and activities:
  - a. **Discharges comprising or containing radioactive matter which are controlled under the Radioactive Substances Act 1993;**



**b. Domestic effluent discharged from certain isolated dwellings.**

This exclusion applies to isolated dwellings which are not connected to a mains sewerage system, AND which are outside areas protected for the abstraction of water for human consumption. Where the Agency considers that discharges from an isolated dwelling would present an unacceptable risk to groundwater protected for drinking purposes outside such areas, it may, in line with its duty to protect groundwater, use its powers under the Water Resources Act 1991 or the Regulation 19 Notice procedure (see paragraphs 79-82 below), where appropriate.

The Agency has produced, for its own internal use and decision-making, groundwater protection maps. These have no statutory force but the Agency may refer to such maps in order to identify those parts of aquifers most at risk. These maps are available for inspection at the Agency's Regional and Area offices.

The Agency may issue further guidance on this issue, but has indicated that it proposes to designate all Zone I (Inner) Protection Zones (50 day travel time in the saturated zone, with a minimum radius of 50m from the abstraction source) as areas protected for the abstraction of water for human purposes in relation to Regulation 2. Septic tanks within these zones will require an authorisation under the Groundwater Regulations. The Agency will consider whether sealed cesspits should be controlled via a code of practice. This approach is derived from the Environment Agency's *Policy and Practice for the Protection of Groundwater (PPPG)*, which will be reviewed in the light of any new codes of practice, covering activities which could lead to a discharge to groundwater, and which the Secretaries of State may approve under Regulation 21.

**c. Discharges containing List I or II substances in quantities and concentrations so small as to pose no present or future threat to groundwater quality**

The Regulations do not apply to any discharge containing a quantity and concentration of listed substances found by the Environment Agency to be "so small as to obviate any present or future danger of deterioration in the quality of the receiving water". This is not a numeric standard, and the European Court has ruled that 'if the quantity of substances in List I or II contained in discharges of other substances is such that the risk of pollution cannot automatically be excluded, the Directive is applicable'. The Environment Agency's consideration of this issue will therefore depend on the nature of the discharge, but any quantities or concentrations which may be appropriate under Regulation 2(1) (c) are likely to be very small indeed, and likely to be similarly stringent to drinking water standards. In all cases it will be prudent to assume that authorisation for disposal to land is necessary, and to seek advice from the Agency accordingly.

In practice this is likely to mean quantities so small that it is obvious (without the need for prior investigation) that they will not cause a rise in concentrations of that substance in the underlying groundwater body.

**d. Activities for which a licence under the Waste Management Licensing**

## **Regulations is required**

This exclusion exists because Regulation 15 of the Waste Management Licensing Regulations already implements the Groundwater Directive for the purpose of that licensing regime. Licences should contain conditions which prevent List I substances reaching, or List II substances polluting, groundwater.

## **Regulation 3 – Discharge of functions**

13. Regulation 3 introduces the provisions which follow and clarifies that authorisations under the Regulations themselves and existing authorisation systems are subject to the new requirements.

## **Definition of List I and II substances**

14. The groups and families of List I and II substances to which the Regulations apply are set out in the Schedule to the Regulations, which is reproduced at Annex A of this guidance. This, in turn, is taken from the Schedule to the Groundwater Directive, and is similar in its overall coverage to the relevant part of the Annex to the Dangerous Substances Directive (76/464/EEC). Substances belong to List I if they are members of the categories in paragraph 1(1) of the Schedule and have not been determined by the Agency to be inappropriate to List I on the basis of a low risk of toxicity, persistence and bioaccumulation. Substances belong to List II if they could have a harmful effect on groundwater and are members of the categories in paragraph 2(1), or are members of categories in paragraph 1(1) of the Schedule which have been determined by the Agency to be inappropriate to List I on the basis of a low risk of toxicity, persistence and bioaccumulation. Substances which are neither in List I nor List II are not subject to the provisions of these Regulations.
15. These determinations are carried out jointly by the Environment Agency, Scottish Environment Protection Agency and the Northern Ireland Environment and Heritage Service. The Agencies consider individual substances based upon their chemical composition, properties or use, reflecting the nature of the families and groups of substances set out in paragraphs 1(1) and 2(1) of the Schedule to the Regulations. A Joint Agency Groundwater Directive Advisory Group, made up of the Environment Agency, the Scottish Environment Protection Agency, regulators, industrial sectors and academic institutions, assists in assessing these substances. The Advisory Group's role is essentially to ensure that assessment of substances is undertaken in a scientifically robust and stringent manner, in line with the definitions of the List I and II families, and that appropriate sources of information

have been identified. Assessments take account of the chemical nature of the substances, the toxicity of the substances, are based on a series of criteria for the relevant characteristics, and involve an evaluation of the data sources and quality of research in respect of the chemicals in question. In 1999 the Advisory Group considered seventy-nine substances which are members of the categories in paragraph 1(1) of the Schedule - set out in Annex B - and recommended that they were not inappropriate to List I. Comments on these substances were invited as part of the public consultation on this guidance.

16. The Advisory Group will periodically consult on further substances as they are considered. For more information on the assessment procedure you should contact the Environment Agency's National Centre for Ecotoxicology & Hazardous Substances, Evenlode House, Howbery Park, Wallingford, OX10 8BD, in order to acquire the "Classification of Listed Substances for the Purposes of the EC Groundwater Directive (80/68/EEC)" which sets out the methods used. Comments on the findings of the Advisory Group should be directed in the first instance to Dr Geoff Brighty at the same address and copied to David Broyd, Water Quality Division, Department of the Environment, Transport and the Regions, Zone 3/E14, Ashdown House, 123 Victoria Street, London SW1E 6DE. The Regulations provide (at paragraph 3(1) of the Schedule) that the Secretary of State may review the classification of substances and notify the Agencies of his decision following such review, whereupon it is the duty of the Agencies to give effect to that decision.
  
17. In terms of the practical assessment of impacts, the Environment Agency is likely, in the first instance, to consider whether a substance could be present in groundwater. The practicalities of analytical techniques (precision, reporting limits, costs etc) should also be considered by the Agency and third parties undertaking the analysis. Wherever appropriate, use should be made of screening techniques for groups of compounds for complex source terms (discharges and disposals), rather than pursue determinations of a large number of specific List I substances.

## SECTION II

### CONTROLS OVER LIST I AND II SUBSTANCES:

#### *Regulation 4 - List I substances*

#### *Regulation 5 - List II substances*

#### *Regulation 6 - Artificial Recharges*

#### *Regulation 13 - Application of measures not to lead to pollution*

#### **Regulation 4 - Prohibition on List I substances reaching groundwater**

18. Throughout the notes on Regulations 4 and 5, which control discharges of List I and II substances to groundwater, there are several references to "prior investigation". This term is explained with reference to Regulation 7 at paragraph 31 below.
19. Regulation 4 sets out rules for authorisations which are designed to prevent direct or indirect discharges of List I substances to groundwater. Prior investigation is required, before the Agency can grant any authorisation, to establish the hydrogeological conditions in the area, the possible purifying powers of the soil and subsoil, and the risk that the discharge's polluting or altering the quality of the groundwater. (Further guidance on prior investigation is given at paragraphs 31-34 below.) No authorisation can be granted for any direct discharge of a List I substance to groundwater. Nor can an authorisation be granted for a disposal of a List I substance to land unless prior investigation has established that an indirect discharge of the substance will not occur, or that such discharge can be prevented by suitable conditions in the authorisation. However, there are certain exceptional circumstances where List I substances may be allowed to be discharged (see paragraph 21 to 24 below).
20. Regulation 4 also sets out the powers available to the Environment Agency to prevent potential discharges of List I substances to groundwater. Regulation 4(4) requires control of such discharges from highway drains to be achieved through Prohibition Notices under section 86 of the Water Resources Act 1991. Where necessary, such Notices would be served where a discharge or a potential discharge could result in the entry of List I substances to, or pollution by List II substances of, groundwater. A Notice under Regulation 19 may prohibit an activity

other than a disposal or tipping for the purposes of disposal, or allow it to continue subject to conditions, in order to prevent indirect discharges of List I substances to groundwater (or an indirect discharge leading to pollution of groundwater by List II substances).

## **CIRCUMSTANCES IN WHICH DISCHARGES OF LIST I SUBSTANCES TO GROUNDWATER MAY BE AUTHORISED**

21. Regulation 4(5)(a) provides that, in exceptional circumstances, the Agency may authorise a discharge of a List I substance into groundwater where the prior investigation shows that:

the groundwater is permanently unsuitable for other uses (especially domestic or agricultural uses), and

the presence of the substance does not impede the use of ground resources, and

(where an authorisation is to be granted) conditions can be imposed requiring that all technical precautions are observed to prevent that substance reaching other aquatic systems or harming other ecosystems.

22. A discharge of List I substances can be authorised only if the groundwater body is declared as permanently unsuitable for use and the additional conditions required at paragraph 20 above are applied. The Agency will be responsible for developing detailed technical criteria for 'permanently unsuitable for other uses'. These should be based on considerations of both the existing quality of groundwater, and take into account the quantity and accessibility of the groundwater body in respect of quality. The Agency will also have regard to the economics of remediation of such groundwater in relation to the potential for use of the ground resources. Where the Agency determines that a groundwater body is permanently unsuitable for other uses, this must be reported to the Secretary of State and may relate only to specific, localised bodies of groundwater.
23. Regulation 4(5)(b) provides that after prior investigation the Agency may also authorise discharges of List I substances to groundwater where the discharge is due to re-injection into the same aquifer (that is, the aquifer from which it was abstracted) of:
- a. water which has been used for geothermal purposes;
  - b. water pumped out from mines and quarries;
  - c. water pumped out during civil engineering works.
24. Any long-standing degradation of the background quality may be taken into

account, provided that the discharge does not impede exploitation of *ground resources* and that it is certain that restoration would not be economically or physically feasible. The Directive requires that there should be no discharge of List I substances to groundwater, other than in the circumstances listed above. In assessing the outcome of prior investigations the Agency will need to ensure, for practical purposes, that there is no discernible effect on the natural, background quality of the groundwater.

### **Regulation 5 - Limiting List II discharges to prevent pollution of groundwater**

25. Regulation 5 provides for the prevention of pollution of groundwater by List II substances and this guidance needs to be read in conjunction with the notes on Regulation 7 at paragraphs 31-34 below. Procedures for the assessment of discharges containing List II substances are similar to those for List I. The Agency may only authorise direct or indirect discharges, or any disposal activity which may lead to an indirect discharge of List II substances, provided that:
  - a. a prior investigation has been carried out (see guidance at paragraphs 31-34 below on prior investigation); AND
  - b. in the light of that investigation, the authorisation includes conditions relating to the technical precautions needed to prevent pollution of groundwater. Conditions may relate *inter alia* to the matters set out at Regulation 10, or may deal with the specific circumstances of a discharge or disposal, and may be triggered by the approaches taken in codes of good practice.
26. One factor which the Agency might take into account during a prior investigation, when considering the threat to groundwater, is the depth of the unsaturated zone. Where a disposal containing a List II substance to land is proposed in an area underlain with a large unsaturated zone, the effect of that unsaturated zone could be for the impact of any List II substances to be sufficiently attenuated to avoid pollution of the groundwater in the saturated zone, having regard to the rate of percolation and purifying characteristics of the subsoil and strata. In these circumstances it may be possible to dispose of more of a List II substance than would be the case for a similar disposal activity carried out in differing geological circumstances, for example, where the proximity of the saturated zone to the surface reduced travel times in, and the purifying effects of, the unsaturated zone. A similar approach would apply to the discharge of List I substances, providing that these did not enter groundwater. Such considerations do not comprise a general rule and can only be applied on a site specific basis, in that they depend on the local geological conditions, the substances in question, the outcome of the prior investigation, and the Environment Agency's assessment.
27. In general, activities in or on land (for example, the activity of sheep-dipping as distinct from the process of disposal of spent sheep dip) do not require authorisation under the Groundwater Regulations. However, where the Agency

considers that such an activity may result in an indirect discharge of a listed substance, it may serve a Notice (under Regulation 19) prohibiting the activity, or allowing it to continue subject to conditions. This provision is aimed at activities where (unauthorised) discharges, intentional or otherwise, occur in such a way that groundwater is placed at risk of pollution as a result of an indirect discharge. This may arise as a result of careless operation or poor design of facilities involving the manufacture, storage or use of listed substances. In considering whether a Notice should be served, the Agency will consider whether the terms of any statutory code of good practice are being complied with or are likely to be complied with. Adherence to a code of good practice should go a long way towards avoidance of the Notice procedure. However, given that codes of practice are inherently general in nature, neither the existence of a statutory code of practice nor a breach of such a code is a prerequisite to the serving of a notice. In other words, the Agency may simply consider that a Notice is required to protect groundwater. In the case of discharges to/from highway drains at Regulation 5(3)(a) the Environment Agency will serve a prohibition notice, under section 86 of the Water Resources Act 1991, where it is necessary to prevent the pollution of groundwater.

### **Artificial Recharge of aquifers, Regulation 6**

28. Each such recharge must be authorised, and such artificial recharges may be authorised on a case by case basis for the purposes of groundwater management. Such an authorisation can only be granted if the Agency determines that there is no risk of pollution of the receiving groundwater. Clearly such a conclusion would be reached on the basis of a prior investigation which would provide sufficient information for the Agency to assess the potential impact of such a recharge.

### **Measures taken must not lead to pollution of groundwater**

29. Regulation 13 requires that any measures - including authorisations granted - taken pursuant to these Regulations must on no account lead, either directly or indirectly, to pollution of groundwater. In determining whether an exclusion applies in respect of a discharge or disposal which might result in a discharge to groundwater, the Agency must have regard to the potential for that discharge to cause pollution of another body of groundwater, and take any measures necessary to prevent such pollution.
30. The same applies to the serving of Regulation 19 Notices.

## **SECTION III**

### **REQUIREMENTS FOR THE AUTHORISATION OF DISPOSALS TO LAND**

*Regulation 7 - Prior Investigation*

*Regulation 8 - Surveillance of groundwater*

*Regulation 9/10 - Conditions on Authorisations*

*Regulation 11 - Review of Authorisations*

*Regulation 12 - Inventory of Authorisations*

*Regulation 14 - Application of provisions of water pollution legislation*

*Regulations 18 and 19 - Authorisation of disposal or tipping of substances in list I or II (see also Sections IV - The Application Process, and VIII - Controls over activities)*

**The requirements for prior investigation (see also paragraphs 4, 18 and 21-24 above)**

31. Regulation 7 sets out, in accordance with the Directive, the requirements for prior investigation. It is a requirement of the Regulations that, before the Agency grants an authorisation, it needs to be satisfied that the vulnerability of the groundwater likely to be affected by a discharge or disposal has been assessed. Prior investigation must take into account the hydrogeological conditions of the area, the possible purifying powers of the soil or sub-soil (primarily within the unsaturated zone, through which indirect discharges travel), and the risk of pollution, or alteration of the quality of the groundwater, that could arise from the discharge. The approach to prior investigation is described under the description of the application procedure at paragraph 48 below. When selecting a disposal site, it will be necessary to consider (with advice from the local Environment Agency office) what type of disposal is required, how often disposals will need to be made, and the soil and geology which occur at the site. By identifying the best disposal site in advance of making an application, an applicant should greatly improve the chances of securing an authorisation.

#### **Possible outcomes of prior investigation**



32. In the light of prior investigation, the following outcomes are possible:
- a. the discharge or disposal would lead to a direct or indirect discharge of List I substances and must be refused in accordance with Regulation 4;
  - b. the discharge or disposal might lead to an indirect discharge of List I substances but can be prevented by the use of technical precautions enforced by conditions in the authorisation (Regulation 4);
  - c. there are significant risks of groundwater pollution by List II substances which could not be addressed through conditions in an authorisation, such that an authorisation should be refused (Regulation 5);
  - d. the disposal or discharge of List II substances may or may not result in a risk of groundwater pollution, which can be prevented by technical precautions, and can therefore be authorised subject to conditions in the authorisation (Regulation 5);
  - e. in the case of List I, the groundwater is found to be permanently unsuitable for other uses and authorisation may be granted, despite the presence of listed substances, provided that (or that precautions can be taken to ensure that) there is no adverse impact on ground resources or other aquatic systems and ecosystems (Regulation 4(5)(a)).
33. An authorisation will be required even where there is a low risk of the discharge or disposal of List I substances reaching, or List II substances polluting, groundwater, if the discharge or disposal is known to contain listed substances in significant quantities and concentrations. It is theoretically possible that the use of a proposed disposal site could never lead to any discharge to groundwater, but this can only be established by the Agency with evidence from a prior investigation.

### **Prior investigation and authorisation in areas of exposed aquifers**

34. It is not the intention to classify large areas of exposed aquifers as unsuitable for disposals but prior investigation in respect of individual proposals will be necessary. Determinations will reflect the merits and circumstances of individual applications and sites in the light of such prior investigation. Where, following prior investigation, an authorisation cannot be granted, it will be necessary for the applicant to identify alternative and acceptable disposal sites, or identify an alternative means of disposal, or avoid the need for disposal from the activity in question.

## **Monitoring groundwater quality**

35. Regulation 8 provides that an authorisation cannot be granted unless the Agency has checked that the groundwater will undergo 'requisite surveillance' - that is, such monitoring as is necessary in the particular circumstances to ensure that groundwater will not be contaminated. This means that the Agency will need to ensure that both any background concentrations of List I and List II substances in groundwater, and the potential impact of a discharge from any activity which is subject to an authorisation, will be monitored where required. This may be achieved both through the national monitoring network, and by ensuring that monitoring facilities are in place, through the medium of conditions on authorisations to discharge, as may be necessary in respect of the sites of individual discharges or disposals. The degree and location of monitoring, including the nature of the facility, sampling frequencies etc, will be what is appropriate for the Agency to meet its obligations under the Groundwater Regulations. It will also depend on local circumstances, and the Agency's own assessment of vulnerability and the risk to local groundwater.
36. It is unlikely that individual monitoring boreholes should be required for the majority of disposal sites. However, in some circumstances it may be necessary for an applicant or operator to provide one or more boreholes to enable the Agency to make assessments of groundwater quality although, where possible, an assessment should be carried out before requiring the provision of such boreholes. The additional cost of installing and maintaining monitoring facilities on a site-specific basis would normally be borne directly by the applicant/operator. In requiring the installation of monitoring facilities, the Agency should ensure that the costs to the operator are in proportion to the perceived risks to groundwater from the proposed disposal.
37. Where possible, the Agency should consider the use of monitoring facilities which serve a group of discharges or disposals, in order to achieve economies of scale and reduce the costs which might be attributable to individual applicants. However, it is likely that hydrogeological conditions will allow this in only a minority of cases.
38. It is expected that in some cases it will be the Agency that undertakes the sampling of boreholes for the purpose of monitoring, to ensure that consistent and quality assured procedures are adopted. Where the Agency is satisfied that there is the necessary expertise, it may be appropriate for the operator to conduct monitoring which is then subject to audit by the Agency. The cost of monitoring, which is part of a prior investigation before an application is determined, should be borne by the applicant.

## **The requirement to obtain an authorisation under the Groundwater Regulations 1998**

39. The Regulations require authorisation of both direct and indirect discharges to groundwater. Indirect discharges may arise from the disposal, or tipping for the purposes of disposal, to land of both List I and List II substances where this might lead to a discharge of List I or II substances to groundwater, for example, the disposal of waste pesticides or spent sheep dip. Regulations 9 and 10 (dealing with the authorisation of direct and indirect discharges respectively) require that each authorisation should state the location, method of discharge, the maximum quantity allowed to be discharged, any conditions required to control the discharge, and any monitoring requirements necessary to demonstrate compliance with the authorisation.
40. Direct discharges of both List I and List II substances to groundwater are already regulated under the Water Resources Act 1991 and continue to need a discharge consent under that Act. In the case of prescribed processes (IPC processes) controlled by the Environment Agency under the Environmental Protection Act, 1990 (EPA90), discharges and disposals affecting groundwater should be controlled under the arrangements for Integrated Pollution Control (IPC). Similarly, relevant installations falling under the PPC Regulations 2000 should be controlled under arrangements for IPPC – see paragraph 4 above.
41. Existing and proposed IPC authorisations, PPC permits and Water Resources Act consents, must be consistent with the requirements of the Groundwater Regulations in order to implement the Groundwater Directive. This will, for example, require scrutiny and possible amendment of certain IPC Process Guidance Notes, as well as review (within the existing provisions for review at least once in every four years, except for EC requirements) of existing IPC authorisations, PPC permits, and consents under the Water Resources Act 1991. Any requirements under the Pollution Prevention and Control Act 1999 to achieve compliance with the IPPC Directive will be incorporated on the same basis. However, where earlier amendment of a consent or authorisation is necessary to ensure compliance with an EC Directive, this can be done within powers provided under existing legislation.
42. In response to an application, and in the light of prior investigation, any authorisation will specify where the discharge may be made and the method of discharge which may be used. It will set out the essential precautions which must be taken to protect groundwater. These will pay particular attention to the nature and concentration of any such substance present in the discharge or disposal, the characteristics of the receiving environment and the proximity of water catchment areas, in particular those for drinking, thermal and mineral water.
43. The authorisation will specify the maximum quantity of any substance

permissible in the effluent during one or more specified periods of time (normally on a daily or annual basis) and the appropriate requirements as to the concentration of any such substance. It will also set out arrangements for monitoring the disposal, and whether measures for the monitoring (requisite surveillance) of groundwater (particularly its quality) are necessary.

### **Review of authorisations**

44. Under Regulation 11, authorisations must be reviewed at least once in every four years. Where an authorisation has not been complied with it may be revoked or amended. Any review of conditions may relate to:
- the substances which may be discharged;
  - the quantities and concentrations of such substances;
  - the method of disposal;
  - the frequency of disposal at the authorised disposal site;
  - the location of authorised disposal site,
  - and any other non-standard conditions.

### **Inventory of authorisations**

45. Regulation 12 gives effect to the Groundwater Directive requirement for an inventory to be kept of the authorisations granted under Regulations 18 and 19 (or as defined in Regulation 1) in accordance with Regulations 4, 5 & 6, of:
- direct or indirect discharges of any substance in List I;
  - direct discharges of any substance in List II, and
  - artificial recharges for the purpose of groundwater management.

### **Who should apply for authorisation**

46. Existing requirements under s85 of the Water Resources Act 1991, and in other legislation controlling discharges to water (see the definition of authorisations in Regulation 1), in respect of discharges of toxic substances to controlled waters (including groundwater) continue to apply. It is an offence under the Act to "cause or knowingly permit" the discharge of polluting matter into controlled

waters, including groundwater - unless that discharge has been authorised in advance under any of the legislation listed at paragraph 4 above. Where the discharger and the land owner are not the same person, responsibility for discharges or disposals, and seeking authorisation for them lies with the person responsible for the discharge.

47. It should be noted that it is the nature of the discharge or disposal, and the characteristics of its location, which are subject to prior investigation. An authorisation will set the type and number of disposals which may be made at any given site and the conditions applying to such disposals. It follows that, if it is likely to be necessary to dispose of List I or List II substances to land, an application should be made in advance for authorisation of the proposed disposal and the site of the disposal. Applications made under the transitional arrangements which applied between 1 January and 1 April 1999 were deemed authorised until disposed of by the Agency. The Agency has now disposed of the vast majority of such applications.

## **SECTION IV**

### **THE APPLICATION PROCESS**

48. In England and Wales applications for authorisations must be made in writing to the Environment Agency. The Agency has developed standard forms and application packs for this purpose. Details of the location and telephone/fax numbers of the EA regional offices from which application packs may be obtained are given at Annex C. It should be remembered that authorisations, following prior investigation, are site specific. If it is intended to make a disposal, or tipping for the purposes of disposal, at a different location from that specified in an authorisation, then a fresh application or a formal variation to an existing authorisation will be necessary.

#### **Advertising an application**

49. The majority of applications for small disposals are unlikely to be complex, or raise issues of wider significance. Regulation 18(2) requires an application to be advertised only in cases where the Agency considers that there are special reasons for doing so. Such special reasons may include that:

the application is particularly complex, for example, it covers multiple

discharge/disposal points, or applies to wide area;

the Agency considers that additional information, pertinent to the determination of the application, might be obtained as a consequence of advertising.

There may also be considerations such as the nature of the substances and the ground conditions.

50. The advertising process should therefore be used sparingly and in the context of more complex applications. It should also be the subject of written guidance by the Agency provided to applicants in cases where the Agency considers that advertising is necessary, along with a formal notice indicating that advertising is required. Although under Regulation 18(2) it is the responsibility of the applicant to advertise, the Agency is able to handle administration of advertisements, if agreed with the applicant. In such cases the applicant would be responsible for the cost.

### **The application process for authorisations**

51. The decision to grant or refuse an authorisation rests with the Agency when an application is first made. Where an appeal against the Agency's determination is made to the Secretary of State, it will be for the Secretary of State to determine that appeal. The Agency can, by written notice, vary or revoke the authorisation. Such variation or revocation might be made where there is, for example, evidence of an unacceptable impact or threat of an impact arising from the authorised discharge or disposal. Unlike a discharge consent issued under the Water Resources Act, which is required to state the period during which no variation or revocation may be served without the holder's consent, an authorisation under the Groundwater Regulations may be modified by the Agency at any time.
52. Since any disposal of a List I or a List II substance to land will need authorisation, and may potentially involve a large number of applications, the Agency will seek to make the process as simple as possible, as follows:

#### ***Initial enquiry***

*The applicant should contact an Agency Area or Regional office (see Annex C) and explain the nature and location of the disposal. The Agency may be able to give, without prejudice, an informal indication as to whether the proposed disposal and its location is likely to present an unacceptable risk to groundwater. The Agency can then provide an application and information pack, if appropriate.*

## **Applications**

*The application pack should provide guidance on filling in the application forms, which should in turn provide the basis of a desk-based prior investigation. The Agency may also determine whether the application comprises a relatively straightforward proposal, in which case a streamlined approach can be adopted for assessment, or whether it is a more complex case requiring additional consideration. In determining which approach is appropriate, the Agency will consider the risk presented by the proposal, and the sensitivity of the site in terms of the vulnerability of groundwater.*

## **Assessment**

*The Agency should assess the information submitted in applications with reference to groundwater protection zones, groundwater vulnerability maps, and any other available, relevant information about groundwater quality and sensitivity in the vicinity of the proposed disposal site. Once appropriate systems are in place, the Agency may wish to consider sending information on protection zones and vulnerability with the application pack or making this available in some other readily accessible way, so that applicants may adjust their applications with a view to avoiding higher risk areas.*

## **Straightforward applications**

*If the Agency's initial assessment of the application indicates that the risk of groundwater pollution is minimal, a relatively simple authorisation may be issued limiting the content and site of the disposal to that specified in the application, and attaching conditions to the proposed disposal activity so defined as appropriate. In such cases, the prior investigation requirement is likely to have been met by the information provided by the applicant at the outset, though a site visit by Agency staff might be necessary to confirm such information.*

## **Applications requiring additional consideration**

*These will be identified from information provided at the initial enquiry stage, on the application form or when a site visit is carried out to confirm whether or not additional information is needed for assessing more complex applications.*

*In some cases additional information from site investigation may be needed (including intrusive investigation). The Agency should indicate the general scope of these investigations and will provide reasonable assistance to the applicant. However, it is the responsibility of the applicant to undertake and bear the costs of such investigation. There can be no guarantee that the completion of an investigation will result in a successful application, and the Agency should point*

*out this possibility in writing to applicants when setting out the scope of the investigation required.*

### **Determination of application**

*The Agency has up to four months to determine applications from the date of receipt of a completed application. Where applications are straightforward and there is sufficient information, the Agency should aim for determination in a much shorter period. For more complex proposals, adequate assessment may exhaust the four months allowed. Any extension of the determination period must be subject to agreement with the applicant.*

*Where, after prior investigation, it is apparent that an application poses an unacceptable risk to groundwater (or other controlled waters), and where conditions attached to an authorisation could not offer adequate protection against such risks, the application will be refused. The Agency would need to consider such matters as whether:*

*there was an unacceptable risk of a release of List I substances to groundwater or of pollution of groundwater by List II substances;*

*there was a risk of pollution to other controlled waters;*

*there was an unacceptable impact on vulnerable sites of high nature conservation value*

*despite requests from the Agency, the applicant has not submitted the information necessary to determine the application which could reasonably be expected from the applicant;*

*the appropriate application fee had been submitted with the application.*

*(Note; in the case of the last two points it is unlikely that the material submitted by the applicant would be regarded as a valid application.)*

*Where the prior investigation indicates that authorisation is possible, it would normally be expected that a refusal would only take place when discussions between the Agency and the applicant had failed to resolve any problems identified with the application within a reasonable timescale.*



## SECTION V

### CHARGING ARRANGEMENTS

#### ***Regulation 16 - Application of Sections 41, 42, and 123 of the Environment Act 1995***

53. The Environment Agency is required, under the Environment Act 1995, to recover the costs which it incurs as a result of enforcing legislation and standards. Regulation 16 of the Groundwater Regulations provides for cost recovery in respect of the processing of applications, checking prior investigations, maintaining inventories and certain elements of the monitoring of groundwater quality. The charges for these activities are set out in the Agency's amended "Charges for Discharges" scheme, which is approved by DETR Ministers and reviewed annually. The scheme divides charges between applications and annual subsistence charges. The Charges for Discharges Scheme (as amended 1 April 2000) is available from the Environment Agency or on its website at [www.environment-agency.gov.uk/epns/charging.html](http://www.environment-agency.gov.uk/epns/charging.html).

#### **Charges for application**

54. The Scheme, as amended with effect from 1 April 1999, provided for a reduced charging band for groundwater authorisations appropriate to the small disposals typical on farms. This band applies to authorisations of up to a total of 5 cubic metres or less per day of effluent discharged and not more than 30 cubic metres per annum. The relevant application charge for this band is set at £92 for 2000/2001 and is reviewed annually. Such charges enable the Agency to recover the costs of administering applications, assessing prior investigations, and issuing authorisations. A notice served under Regulation 19, which authorises an activity subject to conditions, is regarded as an authorisation but is not subject to an application fee. It will be, however, subject to an annual charge (see paragraph 58 below). Notices which prohibit an activity are not subject to charges.
55. Applications should include the appropriate application fee, but where it becomes clear that an application falls outside the scope of the Regulations, the Agency will generally refund the fee. This should not arise where applicants have consulted the Agency about the need for an authorisation before submitting their application (see **The application process for an authorisation** at paragraph 48 above).

## Annual charge

56. There is normally an annual subsistence charge for monitoring a groundwater authorisation, details of which are set out in the Agency's "Charges for Discharges" scheme. However, on 30 March 2000, following publication of the 2000/2001 Charges for Discharges scheme, the Prime Minister announced that annual charges would be waived for first four year period of an initial authorisation for the small-volume and infrequent discharges falling within the reduced charging band. Applicants will benefit from this arrangement pending review of the charging scheme.
57. The Agency may delay bringing an authorisation into effect once it has been approved. At the request of the applicant, subsistence charges may be suspended until the applicant wishes to commence disposal under the authorisation, and informs the Agency accordingly. Once the authorisation has come into effect it cannot be suspended again and, apart from in the circumstances set out at paragraph 55, the annual subsistence charges apply thereafter.
58. Where monitoring is required in relation to specific discharges, the cost of such monitoring, unless specifically required to be borne by the applicant/operator, will be covered by the annual charge as set out in the appropriate national charging band.
59. Discharges which comprise small volumes of wastewater from domestic households in isolated dwellings, and which are currently exempted under the Agency's existing charging scheme, are subject to an application fee but are not subject to annual charges.
60. The Agency may ask an applicant to carry out further investigations (for example, trial pits or boreholes) in order to satisfy the prior investigation requirements. The additional cost of any such requirements will be met by the applicant although there is no guarantee that authorisation for the proposed disposal will be granted.
61. Again, prior consultation with the Agency will assist in judging whether it is worthwhile proceeding with more extensive investigation, or alternatively pursuing an alternative site or means of disposal.

62. **Overall, however, there can be no guarantee of a successful outcome in advance of the outcome of a prior investigation and determination of an application.**

## **SECTION VI**

### **THE IMPACT OF THE REGULATIONS**

#### ***Sectors and processes affected by the Regulations***

63. The following notes are intended to provide a guide to the main sectors and processes which will be subject to the Regulations but are not an exhaustive list. Whether or not a process or sector falls within the scope of the Regulations will depend on the nature and circumstances of the proposed disposal or discharge, but all sectors are potentially affected by the Regulations. Again, the best approach is to consult the Environment Agency about the likely need for authorisation prior to making an application.

#### ***AGRICULTURE***

##### ***Sheep dipping***

64. Where a farmer wishes to dispose of spent sheep dip to land, and this dip contains listed substances (this is usually the case), prior authorisation will be required. Where appropriate, the Agency will consider such disposals under a simplified authorisation procedure. The Agency will also need to be satisfied of compliance with the Waste Management Licensing Regulations 1994. Where the Environment Agency considers that there is a danger of discharging sheep dip to groundwater, it may serve a Notice under Regulation 19, which may authorise the sheep dipping activity, subject to any relevant conditions, or prohibit it.
65. These controls mean that farmers (and/or sheep dipping contractor) need to dip sheep in accordance with good environmental practice and plan in advance the means of disposal. If it is proposed to dispose by spreading onto land on the farm, prior authorisation of a disposal site will be required and application should be made to the Agency. Alternatively it may be possible to tanker waste to an authorised disposal site authorised under the relevant Waste Management Licensing legislation. Where an authorisation has not been granted in advance, storage of the dip may be a temporary option until such time as an appropriate authorisation is granted. In the event that storage is necessary, such storage should be conducted in accordance with any relevant legislation or codes of practice. It should be noted that the storage of spent sheep dip may

also be subject to the Notice procedures outlined above, where it is considered that there is a risk of a release to the environment that could cause pollution of controlled waters.

66. The principles set out above for disposal of sheep dip waste also apply to the disposal of waste from sheep showers.

### ***Disposal of pesticides***

67. Disposal of waste pesticides, and disposal of waste-water from washing down and cleaning pesticide storage or application equipment, may also require authorisation. The storage and use of pesticides will not normally require authorisation if carried out in accordance with any necessary product approval under:

the Control of Pesticides Regulations 1986 (as amended), the Plant Protection Products Regulations 1995 (as amended), the Plant Protection Products (Basic Conditions) Regulations 1997, and the Biocidal Products Regulations 2000;

label instructions, and

relevant Codes of Practice.

The Agency may serve a Regulation 19 Notice where it considers that such storage could present a danger of discharge to groundwater (see paragraph 65 above, but also paragraph 79 - Regulation 19 Notices).

68. The horticultural industry's use of herbicides and pesticides means that authorisation will be required for the disposal of excess run-off and waste-waters from glasshouses and associated facilities, and for land-spreading. Where List I substances are involved it is unlikely that disposal to soakaway would be authorised.

### ***Other agricultural disposals***

69. Where organic farm waste by-products are applied to land for agricultural benefit,

no Groundwater Regulations authorisation should be needed. This would apply, for example, in the case of farm slurries, manures and silage effluent applied to land in accordance with the MAFF Code of Good Agricultural Practice for the Protection of Water. Other materials, such as mushroom composts and dairy washings, may also contain appreciable quantities of nutrients and may be applied to land provided they are for agricultural benefit. Disposal of liquids or effluent would require authorisation, although such disposal to soakaway would not normally be acceptable. Regulation 19 Notices could be used if such activity threatened pollution of groundwater (perhaps resulting from non-compliance with the code) or in some circumstances to impose conditions on the activity to protect groundwater.

### ***Miscellaneous disposals***

70. The disposal of other materials to land (for example, paper, pulp or brewing wastes) not carried out for the purposes of beneficial use/agricultural improvement of the land also require authorisation from the Agency, where such materials contain List I or List II substances. This applies unless it is already covered by a Waste Management Licence, or the activity has been specifically exempted from Waste Management control on the grounds that there is no environmental risk (in which case the risk to groundwater should have been specifically examined).

## **INDUSTRY**

### ***General Industrial operations***

71. Industrial processes and activities may require to dispose of List I or List II substances to land. Where, by reason of the activity being carried out, there may be a risk of a discharge to groundwater, it will come within the scope of the Regulations.—Industrial units should already have discharge consents for direct disposals to controlled waters (including groundwater) under the Water Resources Act 1991, and these will continue in their current format. Likewise, existing IPC authorisations (and PPC permits and Waste Management Licences) must take into account the requirements of the Groundwater Regulations/Directive - see paragraph 73 below.
72. In addition to activities likely to specifically need authorisations, some sectors (for example, metal finishing, dry cleaning and petrol filling stations) might be affected by the serving of notices.

### ***Large disposals***

73. For processes which are subject to authorisations under Integrated Pollution Control (IPC/PPC), groundwater protection must be taken into account in the determination of the authorisation. All IPC authorisations are subject to review every 4 years and, where the need to protect groundwater arises, an authorisation may need to be reviewed. Controls under the Pollution Prevention and Control Act 1999 arising from transposition of the Integrated Pollution Prevention and Control Directive will have regard to the requirements of the Groundwater Regulations.

### ***Sewage treatment works***

74. Spreading of sewage effluent or sludge from water industry sewage treatment works will not be subject to control when it is for beneficial use or improvement of the land. However, the Regulations would apply where listed substances are likely to be, discharged or disposed of as waste and other legislative controls are insufficient to meet the requirements of the Groundwater Directive.

### ***Minerals workings***

75. Under the Water Resources Act 1991, water discharges from mines are controlled by consents from the Environment Agency. Any such discharge to groundwater which contains, or may contain, listed substances will also be within the scope of the Groundwater Regulations, as will any disposal, or tipping for the purpose of disposal, to land of any spoil which contains, or may contain, listed substances. Similarly the process of mineral extraction itself, being an activity "in or on land", is subject to the Regulations, and the Environment Agency has powers under Regulation 19 to prohibit, or place conditions upon, the mining or quarrying if it could result in indirect discharges of listed substances to groundwater. This is in addition to the normal planning controls relating to mines and mineral workings.
76. As far as abandoned mines and quarries are concerned, the Environment Agency has powers under the Water Resources Act 1991 to take remedial action if this is necessary to prevent groundwater pollution. The need for an authorisation under the Groundwater Regulations will depend upon the nature of the individual site, though in general an authorisation would not normally be required for long abandoned mines where activity has ceased. The Regulations and this guidance supersede the relevant guidance contained in Department of the Environment

Circular 4/82.

### ***Cemeteries***

77. Burials in cemeteries would be expected to require an authorisation under the Regulations only in exceptional circumstances. They are subject to the Agency's notice powers under the Regulations but normally the Agency should, where possible, aim to use measures other than the Regulations to address any potential problems - in particular, by raising any issues concerning groundwater protection at planning stage.

## **SECTION VII**

### **REGISTERS UNDER S190 OF THE WATER RESOURCES ACT 1991 OR S41 OF THE CONTROL OF POLLUTION ACT 1974**

78. In addition to the inventory requirements in Regulation 12, the Agency is required, under Regulation 22, to maintain registers containing such matters as: Regulation 19 Notices prohibiting activities which might result in discharges of listed substances to groundwater and variations thereto; convictions; assessments; monitoring information; classifications, and approved codes of practice. Regulation 22(2) allows the Agency to remove monitoring information which has been on the registers for more than four years together with any information that has been superseded over the same period.



## **SECTION VIII**

### **CONTROLS OVER ACTIVITIES**

#### ***Regulation 19 - Notices***

#### ***Regulation 21 - Codes of practice***

#### **The Notice procedure – Regulation 19**

79. Regulation 19 provides that the Agency may issue notices in order to control activities (other than the activities of disposal) which may cause an indirect discharge to groundwater of a substance in List I, or pollution of groundwater resulting from an indirect discharge of substances in List II.
80. A notice can work in one of two ways:
- i. where the Agency considers that the risks presented by the activity are unacceptable (in the sense that the activity is likely to lead to a discharge of listed substances to groundwater which is not otherwise authorised), then a notice can be served on the operator prohibiting the activity. Such a 'prohibition notice' is not subject to charges under the Agency's charging scheme, but may well involve costs to the operator in respect of any remedial works associated with pollution prevention (particularly where the Agency uses its powers under the Anti Pollution Works Regulations 1999 to require works or preventative action to prevent a discharge).
  - ii. the Agency may also serve a notice which allows the activity in question to continue, subject to conditions which would be designed to prevent or control any discharge and so prevent the entry into groundwater of List I substances, or avoid pollution of groundwater by List II substances. Such 'conditional' notices will be subject to annual charges under the Agency's charging scheme (see paragraphs 54 and 58 above).
81. In considering whether to issue a notice, the Agency should take account of any relevant statutory code of practice (see paras 83-86 below), having regard to individual site circumstances, and whether or not such a code is being, or is likely to be, complied with. On this basis, therefore, compliance with an approved code

should normally be of considerable assistance in ensuring that the Agency does not need to issue a Prohibition Notice. However, the fact that a code is being followed does not mean that a notice cannot be served, and would not be a defence in respect of the provisions in the Regulations derived from Section 85 of the Water Resources Act 1991. For example, a notice with conditions might be required where an activity is in a sensitive location, or where inherent risks need to be managed through conditions designed to prevent groundwater pollution. In addition, emergency procedures to deal with pollution incidents under the Water Resources Act 1991 remain in place.

82. Thus an activity 'in or on land' does not of itself require an authorisation under these Regulations. However, under the Regulations, the Agency has a duty to protect groundwater and may use the powers at Regulation 19 to serve notices on activities, or proposed activities, which might threaten groundwater quality. Since, under Regulation 21, the Agency will consider whether or not any guidance in a code of practice has been, or is likely to be, complied with, it is very much in the interests of prospective applicants, or those engaged in activities which could result in discharges to groundwater, to consult any relevant Code of Practice or pollution prevention guidance. The Agency may be able to indicate whether, in the light of earlier consideration, for example as the result of a planning application, it would be likely to serve a Regulation 19 Notice in respect of a proposed or existing activity without prejudice to proper enforcement of the Regulations. Use of this Notice power may in practice influence the location of certain activities, and, because of conditions attached to a Notice, the manner in which they are conducted. An activity involving hazardous substances also requires consent under the Planning (Hazardous Substances) Act 1990. The Agency is a statutory consultee in such cases.

### **Codes of Practice - Regulation 21**

83. As mentioned above, the provisions of Regulation 21 recognise the role of statutory codes of practice in groundwater protection, and as a material consideration in enforcing the Regulations. Regulation 21 provides for Ministers to approve codes of practice for the purposes of the Regulations. Approved codes would cover good practice and techniques to comply with the Regulations in order to prevent List I substances reaching, or List II substances from polluting, groundwater. Examples of existing codes of practice include the Water Code (MAFF) and the Pesticides Code (MAFF). A sheep dipping code is soon to be published.
84. Although contravention of a code is not of itself an offence, evidence of the failure to observe a code of practice, and any risk of groundwater pollution is likely to result in service of a notice. On the other hand, adherence to an approved code of

practice does not comprise a defence against the offence of discharging to controlled waters or making a disposal to land without authorisation.

85. Ministers may approve or withdraw approval from codes of practice by notifying the Agency and publicising such action. It is the Agency's duty to publicise approved codes and to bring them to the attention of those engaged in any relevant activity. This can be through general publicity, contact with trade associations, or by direct contact. It is recognised that in the months after the introduction of a new statutory code of practice there may be a period of adjustment whilst activities are brought into line with the code.
86. The Agency may wish to advise Ministers on the need for and scope of potential codes of practice. There are many good codes of practice in existence which have been drawn up for a variety of purposes. Where appropriate, it should be possible to take advantage of the contents of such codes with a view to updating and rationalising them. To this end DETR will work closely with representative bodies and trade organisations who produce their own codes. In addition, it may be possible to produce a general code of practice, to cover the wider requirements of the Groundwater Regulations, for use where activity-specific codes do not exist.

### **The relationship between authorisations and notices**

87. Where disposal (or tipping for the purposes of disposal) of listed substances is being undertaken to land, authorisation (and therefore an application) is necessary. Any such unauthorised disposal, or indirect discharge arising from it, is an offence. In the case of any other activity, where it is evident to the Agency that there is only a low risk of pollution, reasonable and practical steps should be taken to ensure that there is effective control. Where appropriate, reference may be made to approved Codes of Practice or other relevant guidance which may assist in assessing and controlling the risks.
88. Conditional notices would be served by the Agency where there is a possibility of an indirect discharge as a result of the siting and conduct of an activity or operation (for example, through leaching or leaking from stored substances, badly managed sheep dips etc.), rather than a specific discharge or disposal which requires authorisation *per se*. Furthermore, the conditions must be capable of being effective, and of being complied with and monitored.
89. Thus, where circumstances justify it, the Agency may serve conditional notices on activities within certain areas because of the inherently high risk of pollution to

groundwater those activities pose (because of their proximity to sensitive aquifers). Alternatively it may be the activity itself (for example, an underground storage tank containing listed substances) which poses the main risk, or a combination of both. Conditions attached to such notices are likely to include monitoring requirements.

90. A prohibition notice may be necessary for activities to which groundwater is highly sensitive, in terms of either their operation or location, and where the risk of pollution cannot be controlled either through an authorisation or by conditions on a conditional notice.

## **SECTION IX**

### **AMENDMENT OF OTHER LEGISLATION**

#### ***Regulations 14,15, and16***

#### **Amendment of the Water Resources Act, 1991**

91. Section 85 of the Water Resources Act 1991 is amended so that the offences which it describes in respect of unauthorised discharges are applied to the requirements for authorisation of disposal, or tipping for the purposes of disposal to land, and notices under the Groundwater Regulations. The provisions of section 88(1) and 89 are similarly applied, providing such defences (in respect of the discharge of polluting matter) as that the discharge is in accordance with the conditions of an authorisation issued by the Environment Agency under the Groundwater Regulations or has been made in an emergency in order to avoid danger to life or health. As is the case for other discharges, if such a discharge is made it must be notified to the Agency as soon as reasonably practicable after the event and all steps must be taken as are reasonably practicable to minimise the extent of the discharge.
  
92. Existing procedures under section 191 of the Water Resources Act 1991 (which deal with the exclusion of confidential and sensitive material in respect of national security and the transfer of authorisations) are applied in the Groundwater Regulations.

#### **Extension of charging arrangements under Sections 41, 42 and 123 of the Environment Act 1995**

93. Regulation 16 applies Sections 41 and 42 of the Environment Act 1995 (enabling the Agency to recover its costs) to authorisations under Regulation 18 and to Notices under Regulation 19. The existing Charges for Discharges (CfD) scheme, as amended to take account of the small discharges which may be authorised under the Groundwater Regulations, has applied since 1 April 1999, in succession to the arrangements which applied in the transitional period.

## **Section 71 of the Environmental Protection Act 1990 - explanation of effect**

94. Under Regulation 15 of the Groundwater Regulations, Section 71 of the EPA (obtaining information) shall apply for the purposes of the Regulations. Section 71 enables the Secretary of State to require by notice from the Agency, as the waste regulatory authority, the supply of information about the discharge of its functions. Similarly the Secretary of State and the Agency, as waste regulation authority, may serve notices on third parties to supply such information. Failure to supply such information is an offence under the Act.

## **Explanation of relationship of Waste Management Licensing to Groundwater Regulations**

95. (See also notes on Regulation 2 at paragraph 11 above.) Regulation 2 provides that the Groundwater Regulations should not apply to any activity for which a waste management licence is required - in other words it is not necessary for an activity to be licensed under both the Waste Management Licensing Regulations and the Groundwater Regulations. However, activities which are exempted from the waste management licensing regime are not automatically exempted from the provisions of the Groundwater Regulations, and separate assessment under the Groundwater Regulations may be needed.
96. In addition, the Agency must have regard to the provisions of the Framework Directive on Waste when issuing Regulation 18 authorisations or Regulation 19 Notices, since the effect of Regulation 17 is to apply the requirements of Schedule 4 of the Waste Management Licensing Regulations to discharge consents, groundwater authorisations and notices.

## **SECTION X**

### **OTHER ISSUES**

#### ***The arrangements for Appeals***

97. Regulation 20 sets out arrangements for appealing to the Secretary of State against a determination by the Agency in respect of an application made for authorisation of a disposal under Regulation 18, or the issuing of a notice under Regulation 19. In order to allow for the transitional period which ran from 1 January to 1 April 1999 (during which time applications for existing disposals by the same person were deemed to be authorised until otherwise disposed of by the Agency) and, in order to allow the Agency to deal with new applications, no appeal against a Regulation 18 or 19 decision could be made before 1 August 1999.
98. Under Regulation 20, an applicant who is aggrieved by a decision of the Agency in respect of an authorisation or a Notice may appeal in writing to the Secretary of State within three months of notification of the decision in the case of an authorisation, or within three weeks of service in the case of a Notice. In each case this period can be extended by the Secretary of State.
99. Where the Agency does not dispose of the application within the four month period (starting either from the date of the application, or the date on which advertising, where necessary, is complete) for determination the applicant may treat this as a deemed refusal and elect to appeal to the Secretary of State under Regulation 20. However, the Agency may agree with the applicant (at Regulation 20(2)(b)(ii)) an extension of time for determination, and on this basis it may be possible to avoid generating appeals which could otherwise be settled by agreement.

#### ***Transitional provisions***

100. The transitional arrangements at Regulation 23 ceased to operate after 1 April 1999 but under those arrangements it was possible to make application for an authorisation between 1 January 1999 and 1 April 1999 when the Regulations came fully into force. The transitional arrangements further provided for compliance with the Regulations with effect from 1 April 1999.

101. Applications made in this way before 1 April 1999 **and** for which the disposal concerned was substantially the same as an existing activity, and had been carried on by the applicant or his predecessor, were deemed to have been authorised until such time as the Agency determines the application.
  
102. To ensure that disposals with deemed authorisation do not give rise to pollution in the short term, Regulation 19(2) enables a Notice to be served on such an activity before the Agency has finally disposed of the application. However, in serving such a notice, the Agency will be deemed to have disposed of the application. It will be the Agency's duty to ensure that, in serving a notice in such circumstances, all issues relevant to the application are dealt with at that time and covered in the notice.
  
103. Any unauthorised disposal made after 1 April 1999, and requiring authorisation under the Regulations, is in breach of the Regulations, and constitutes an offence.



### Schedule of Listed Substances

#### LIST I

1. (1) Subject to sub-paragraph (2) below, a substance is in list I if it belongs to one of the following families or groups of substances :
  - (a) organohalogen compounds and substances which may form such compounds in the aquatic environment;
  - (b) organophosphorus compounds;
  - (c) organotin compounds;
  - (d) substances which possess carcinogenic, mutagenic or teratogenic properties in or via the aquatic environment;
  - (e) mercury and its compounds;
  - (f) cadmium and its compounds;
  - (g) mineral oils and hydrocarbons;
  - (h) cyanides.
- (2) A substance is not in list I if it has been determined by the Agency to be inappropriate to list I on the basis of a low risk of toxicity, persistence and bioaccumulation.

#### LIST II

2. (1) A substance is in list II if it could have a harmful effect on groundwater and it belongs to one the following families or groups of substances:
  - (a) the following metalloids and metals and their compounds:

Zinc	Tin
Copper	Barium
Nickel	Beryllium
Chromium	Boron
Lead	Uranium

Selenium	Vanadium
Arsenic	Cobalt
Antimony	Thallium
Molybdenum	Tellurium
Titanium	Silver.

- (b) biocides and their derivatives not appearing in list I;
  - (c) substances which have a deleterious effect on the taste or odour of groundwater, and compounds liable to cause the formation of such substances in such water and to render it unfit for human consumption;
  - (d) toxic or persistent organic compounds of silicon, and substances which may cause the formation of such compounds in water, excluding those which are biologically harmless or are rapidly converted in water into harmless substances;
  - (e) inorganic compounds of phosphorus and elemental phosphorus;
  - (f) fluorides;
  - (g) ammonia and nitrites.
- (2) A substance is also in list II if-
- (a) it belongs to the families and groups of substances set out in paragraph 1(1) above;
  - (b) it has been determined by the Agency to be inappropriate to list I under paragraph 1(2); and
  - (c) it has been determined by the Agency to be appropriate to be classed in list II having regard to toxicity, persistence and bioaccumulation.
3. (1) The Secretary of State may review any decision of the Agency in relation to the exercise of its powers under paragraph 1(2) or 2(2).
- (2) The Secretary of State shall notify the Agency of his decision following a review under sub-paragraph (1) above and it shall be the duty of the Agency to give effect to that decision.
4. The Agency shall maintain an up to date summary of the effect of its determinations under this Schedule and make it available to the public.

### List of substances recommended to be confirmed as List I

Aldrin	Diuron
Atrazine	Endosulfan
Azinphos methyl	Endrin
Azinphos-ethyl	Fenitrothion
Bromoxynil (as Bromoxynil-phenol)	Fenthion
Bromoxynil octanoate	Heptachlor
Cadmium	Hexachlorobenzene
2-Chloroaniline	Hexachlorobutadiene (HCBD)
Chlorobenzene	Hexachlorocyclohexane
Chlordane	Hexachloroethane
Chloro-2,4-dinitrobenzene	Hexachloronorborene
Chlorfenvinphos	Hexaconazole
4-Chloro-3-methylphenol	3-Iodo-2-propionyl n-butyl carbamate (IPBC)
Chloro-2-nitrobenzene	Linuron
Chloro-3-nitrobenzene	Malathion
Chloro-4-nitrobenzene	Mercury
2-Chlorophenol	Mevinphos
Chlorothalonil	Oxydemeton-methyl
2-Chlorotoluene	Parathion
$\alpha$ -Chlorotoluene	Parathion-methyl
Chlorpyrifos	Pentachlorobenzene
Coumaphos	Pentachloroethane
Cypermethrin	Pentachlorophenol (PCP)
DDT	Permethrin
Demeton	Propanil
Diazinon	Simazine
Dibutyl bis(oxy-lauroyl)tin	Tetrabutyltin
Dichlofluanid	1,2,4,5-Tetrachlorobenzene
Dichloroaniline	Tetrachloroethylene
1,2-Dichlorobenzene	Triazophos
1,3-Dichlorobenzene	Tributyl tin oxide (TBTO)
1,4-Dichlorobenzene	Tributyl-phosphate
Dichloronitrobenzene (all isomers)	Trichlorfon
2,4-Dichlorophenol	1,2,4-Trichlorobenzene
1,3-Dichloropropene	Trichloroethylene
Dichlorprop	Trichlorophenol (all isomers)
Dichlorvos	Trifluralin
Dicofol	Triphenyl tin oxide (TPTO)
Dieldrin	Triphenyl-phosphate
Dimethoate	

## List of Environment Agency Regional Offices

<p><b>Anglian</b></p> <p>Head Office: Kingfisher House Goldhay Way Orton Goldhay Peterborough PE2 5ZR Tel: 01733 371 811 Fax: 01733 231 840</p> <p>Northern Area (Lincoln) Tel: 01522 513100 Fax: 01522 512927</p> <p>Central Area (Huntingdon) Tel: 01480 414581 Fax: 01480 413381</p> <p>Eastern Area (Ipswich) Tel: 01473 727712 Fax: 01473 724205</p>	<p><b>North West</b></p> <p>Head Office: Richard Fairclough House Knutsford Road Warrington WA4 1HG Tel: 01925 653 999 Fax: 01925 415 961</p> <p>Northern Area (Penrith) Tel: 01768 866666 Fax: 01768 865606</p> <p>Central Area (Preston) Tel: 01772 339882 Fax: 01772 627730</p> <p>Southern Area (Birchwood, Warrington) Tel: 01925 840000 Fax: 01925 852260</p>	<p><b>North East</b></p> <p>Head Office: Rivers House 21 Park Square South Leeds LS1 2QG Tel: 0113 244 0191 Fax: 0113 246 1889</p> <p>Northumbria Area (Newcastle-upon-Tyne) Tel: 0191 203 4000 Fax: 0191 203 4004</p> <p>Dales Area (York) Tel : 01904 692296 Fax: 01904 693748</p> <p>Ridings Area (Leeds) Tel: 0113 231 4600 Fax: 0113 231 4609</p>	<p><b>Thames</b></p> <p>Head Office: Kings Meadow House Kings Meadow Road Reading RG1 8DQ Tel: 0118 953 5000 Fax: 0118 950 0388</p> <p>North East Area (Hatfield) Tel: 01707 632300 Fax: 01707 632500</p> <p>South East Area (Camberley) Tel: 01276 454300 Fax: 01276 454301</p> <p>West Area (Wallingford) Tel: 01491 832801 Fax: 01491 828302</p>
<p><b>Midlands</b></p> <p>Head Office: Sapphire East 550 Streetsbrook Road Solihull B91 1QT Tel: 0121 711 2324 Fax: 0121 711 5824</p> <p>Upper Severn Area (Shrewsbury) Tel: 01743 272828 Fax: 01743 272138</p> <p>Lower Severn Area (Tewkesbury) Tel: 01684 850951 Fax: 01684 293599</p> <p>Upper Trent Area (Lichfield) Tel: 01543 444141 Fax: 01543 444161</p> <p>Lower Trent Area (Nottingham) Tel: 0115 945 5722 Fax: 0115 981 7743</p>	<p><b>Southern</b></p> <p>Head Office: Guildbourne House Chatsworth Road Worthing West Sussex BN11 1LD Tel: 01903 832 000 Fax: 01903 821 832</p> <p>Hampshire and Isle of Wight Area (Hampshire) Tel: 01962 713267 Fax: 01962 841573</p> <p>Kent Area (WestMalling) Tel: 01732 875587 Fax: 01732 875957</p> <p>Sussex Area (Worthing) Tel: 01903 215835 Fax: 01903 215884</p>	<p><b>Southwest</b></p> <p>Head Office: Manley House Kestrel Way Exeter EX2 7LQ Tel: 01392 444 000 Fax: 01392 444 238</p> <p>Cornwall Area (Bodmin) Tel: 01208 78301 Fax: 01208 78321</p> <p>Devon Area (Exminster) Tel: 01392 444000 Fax: 01392 316016</p> <p>North Wessex Area (Bridgewater) Tel: 01278 457333 Fax: 01278 452985</p> <p>South Wessex Area (Blandford) Tel: 01258 456080 Fax: 01258 455998</p>	<p><b>Wales</b></p> <p>Head Office: Rivers House/Plas-yr-Afon St Mellons Business Park St Mellons Cardiff CF3 0EY Tel: 029 2077 0088 Fax: 029 2079 8555</p> <p>Northern Area (Bangor) Tel: 01248 670770 Fax: 01248 670561</p> <p>South East Area (Cardiff) Tel: 029 2077 0088 Fax: 0292079 8555</p> <p>South West Area (Haverfordwest) Tel: 01437 760081 Fax: 01437 760881</p>
<p><b>Environment Agency General Enquiry Line: 0845 933 3111</b></p>			

