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STATUTORY INSTRUMENTS

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**1994 No. 2841**

**WATER, ENGLAND AND WALES**

**The Urban Waste Water Treatment  
(England and Wales) Regulations 1994**

<i>Made</i>	- - - -	<i>4th November 1994</i>
<i>Laid before Parliament</i>		<i>9th November 1994</i>
<i>Coming into force</i>	- -	<i>30th November 1994</i>

The Secretary of State for the Environment and the Secretary of State for Wales, being Ministers designated<sup>(1)</sup> for the purposes of section 2(2) of the European Communities Act 1972<sup>(2)</sup> in relation to measures relating to the collection, treatment and discharge of urban waste water, and the treatment and discharge of waste water from certain industrial sectors, acting jointly in exercise of the powers conferred on them by the said section 2(2) and of all other powers enabling them in that behalf, hereby make the following Regulations:

**Citation, commencement and extent**

1. These Regulations may be cited as the Urban Waste Water Treatment (England and Wales) Regulations 1994, shall come into force on 30th November 1994 and shall extend to England and Wales.

**Interpretation**

2.—(1) In these Regulations, unless the context otherwise requires—

“agglomeration” means an area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point;

“the Authority” means the National Rivers Authority;

“coastal waters” means the waters outside the low-water line or the outer limit of an estuary;

“collecting system” means a system of conduits which collects and conducts urban waste water;

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(1) S.I.1992/1711.

(2) 1972 c. 68.

“the Directive” means Council Directive [91/271/EEC](#) concerning urban waste water treatment<sup>(3)</sup>, and references to other Community Directives are references to Directives other than Council Directive [91/271/EEC](#);

“domestic waste water” means waste water from residential settlements and services which originates predominantly from the human metabolism and from household activities;

“estuary” means the transitional area at the mouth of a river between fresh-water and coastal waters, the outer (seaward) limits of which are shown on maps kept in accordance with regulation 12;

“eutrophication” means the enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned;

“high natural dispersion area” has the meaning given by regulation 3;

“industrial waste water” means any waste water which is discharged from premises used for carrying on any trade or industry, other than domestic waste water and run-off rain water;

“population equivalent” is a measurement of organic biodegradable load, and a population equivalent of 1 (1 p.e.) is the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60g of oxygen per day (the load shall be calculated on the basis of the maximum average weekly load entering the treatment plant during the year, excluding unusual situations such as those due to heavy rain);

“secondary treatment” means treatment of urban waste water by a process generally involving biological treatment with a secondary settlement or other process in which the requirements established in Table 1 in Schedule 3 are respected;

“sensitive area” has the meaning given by regulation 3;

“sludge” means residual sludge, whether treated or untreated, from urban waste water treatment plants;

“urban waste water” means domestic waste water or the mixture of domestic waste water with industrial waste water and/or run-off rain water;

and other expressions used in the Directive have the same meaning as in the Directive.

(2) Any reference in these Regulations to a numbered regulation or Schedule is a reference to the regulation or Schedule so numbered in these Regulations.

### **Sensitive areas and high natural dispersion areas**

3.—(1) In these Regulations—

- (a) “sensitive area” means an area of water which the Secretary of State has identified in accordance with the criteria set out in Part I of Schedule 1, and which is shown as such on maps deposited with the Authority for the purposes of this regulation;
- (b) “high natural dispersion area” means an area of water which the Secretary of State has identified in accordance with the criteria set out in Part II of Schedule 1, and which is shown as such on maps deposited with the Authority for the purposes of this regulation.

(2) The Secretary of State shall review the identification of sensitive areas and high natural dispersion areas, in accordance with the relevant criteria in Schedule 1, no later than 31st December 1997 and thereafter at intervals of no more than four years.

(3) Where, following a review under paragraph (2) above, an area of water becomes or ceases to be identified as a sensitive area or a high natural dispersion area the Secretary of State shall

(3) OJNo. L 135, 30.5.91, p. 40.

deposit with the Authority, in substitution for the maps already so deposited for the purposes of this regulation, such further maps as may be necessary to reflect the changes in identification.

### **Duty to provide and maintain collecting systems and treatment plants**

4.—(1) This regulation supplements the duty imposed on every sewerage undertaker by section 94 of the Water Industry Act 1991<sup>(4)</sup> (general duty to provide sewerage system) and any contravention of the requirements of this regulation shall be treated for the purposes of that Act as a breach of that duty.

(2) Subject to paragraph (3) below, the duty imposed by subsection (1)(a) of the said section 94 shall include a duty to ensure that collecting systems which satisfy the requirements of Schedule 2 are provided—

- (a) where the urban waste water discharges into receiving waters which are a sensitive area, by 31st December 1998 for every agglomeration with a population equivalent of more than 10,000; and
- (b) without prejudice to sub-paragraph (a) above—
  - (i) by 31st December 2000 for every agglomeration with a population equivalent of more than 15,000; and
  - (ii) by 31st December 2005 for every agglomeration with a population equivalent of between 2,000 and 15,000.

(3) Paragraph (2) above shall not apply where either—

- (a) the Authority has certified that the establishment of a collecting system is not justified because it would produce no environmental benefit; or
- (b) the Secretary of State has certified that the establishment of a collecting system is not justified because it would involve excessive cost,

and individual systems or other appropriate systems are provided and the Authority has certified that those systems achieve the same level of environmental protection.

(4) The duty imposed by subsection (1)(b) of the said section 94 shall include a duty to ensure that urban waste water entering collecting systems is, before discharge, subject to treatment provided in accordance with regulation 5, and to ensure that—

- (a) plants built in order to comply with that regulation are designed (account being taken of seasonal variations of the load), constructed, operated and maintained to ensure sufficient performance under all normal local climatic conditions;
- (b) treated waste water and sludge arising from waste water treatment are reused whenever appropriate; and
- (c) disposal routes for treated waste water and sludge minimise the adverse effects on the environment.

### **Requirements as to provision of treatment**

5.—(1) Subject to paragraph (5) below, treatment plants which provide secondary treatment or an equivalent treatment shall be provided—

- (a) by 31st December 2000 or, in an exceptional case, such later date (not being later than 31st December 2005) as the Commission may agree pursuant to a request under Article 8(1) of the Directive, in respect of all discharges from agglomerations with a population equivalent of more than 15,000;

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(4) 1991 c. 56.

(b) by 31st December 2005 in respect of all discharges from agglomerations with a population equivalent of between 10,000 and 15,000;

(c) by 31st December 2005 in respect of all discharges to freshwaters and estuaries from agglomerations with a population equivalent of between 2,000 and 10,000.

(2) Subject to paragraph (3) below, treatment plants which provide more stringent treatment than that described in paragraph (1) above shall be provided by 31st December 1998 in respect of all discharges from agglomerations with a population equivalent of more than 10,000 into sensitive areas, or into the relevant catchment areas of sensitive areas where the discharges contribute to the pollution of these areas.

(3) Paragraph (2) above shall not apply in relation to a sensitive area where the Authority has certified that it is satisfied, as a result of monitoring, that the minimum percentage of reduction of the overall load entering all urban waste water treatment plants in that area, and all urban waste water treatment plants in the catchment area of that area the discharges from which contribute to the pollution of that area, is at least 75% for total phosphorus and at least 75% for total nitrogen.

(4) Where, following a review of the identification of waters as sensitive areas or high natural dispersion areas under regulation 3, an area ceases to be identified as a high natural dispersion area or becomes identified as a sensitive area, then, as respects that area, paragraph (1) or, as the case may be, paragraph (2) above shall have effect as if the relevant date specified in that paragraph were the seventh anniversary of the change of identification or, if later, the date so specified.

(5) Discharges of urban waste water from agglomerations with a population equivalent of between 10,000 and 150,000 (or, in an exceptional case and with the agreement of the Commission pursuant to Article 8(5) of the Directive, of more than 150,000) to coastal waters which are in high natural dispersion areas, and discharges from agglomerations with a population equivalent of between 2,000 and 10,000 into estuaries which are in high natural dispersion areas, may be subjected to less stringent treatment than that described in paragraph (1) above so long as—

(a) the discharges receive at least primary treatment in conformity with the control procedures set out in Part II of Schedule 3; and

(b) the Authority has certified that it is satisfied that comprehensive studies have indicated that such discharges will not adversely affect the environment.

(6) The Authority shall provide the Secretary of State with such information concerning the studies mentioned in paragraph (5)(b) above as he may require for the purpose of enabling him to comply with Article 6(2) of the Directive.

(7) Appropriate treatment of urban waste water entering collecting systems shall be provided by 31st December 2005 in respect of—

(a) discharges to freshwaters and estuaries from agglomerations with a population equivalent of less than 2,000; and

(b) discharges to coastal waters from agglomerations with a population equivalent of less than 10,000.

(8) In this regulation—

(a) “appropriate treatment” means treatment of urban waste water by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions of the Directive and other Community Directives;

(b) “primary treatment” means treatment of urban waste water by a physical and/or chemical process involving settlement of suspended solids, or other processes in which the BOD<sub>5</sub> of the incoming waste water is reduced by at least 20% before discharge and the total suspended solids of the incoming waste water are reduced by at least 50%.

### **Discharges of treated urban waste water**

6.—(1) Discharges from urban waste water treatment plants described in paragraph (1) or (2) of regulation 5, or from any such plant which provides treatment in accordance with paragraph (5) of that regulation, (including any such plants which are provided other than by sewerage undertakers) shall satisfy the relevant requirements of Part I of Schedule 3.

(2) It shall be the duty of the Authority, in exercising its functions under Chapter II of Part III of the Water Resources Act 1991<sup>(5)</sup> (pollution offences), to secure—

- (a) with respect to any such discharge as is described in paragraph (1) above, that the requirements of that paragraph are satisfied;
- (b) with respect to any discharge described in paragraph (5) or (7) of regulation 5 (including any such discharge from an urban waste water treatment plant which is provided other than by a sewerage undertaker), that the requirements of the said paragraph (5) or, as the case may be, the said paragraph (7) are satisfied;
- (c) with respect to any discharge from a collecting system described in regulation 4 or an urban waste water treatment plant described in regulation 5, the limitation of pollution of receiving waters due to storm water overflows;
- (d) with respect to the discharge of sludge—
  - (i) that the discharge of sludge to surface waters is phased out by 31st December 1998; and
  - (ii) that the total amount of toxic, persistent or bioaccumulable materials in the sludge which may be discharged to surface waters pursuant to consents under the said Chapter II is controlled by such consents and progressively reduced during the period ending on that date.

(3) The Authority shall at regular intervals review and, if necessary for the purpose of complying with this regulation, modify or revoke consents granted under the said Chapter II.

(4) Nothing in paragraph 7 of Schedule 10 to the Water Resources Act 1991 shall restrict the power of the Authority to modify or revoke a consent in pursuance of the duty imposed by this regulation.

(5) All lakes and ponds shall be treated as controlled waters for the purposes of section 85 of that Act (offences of polluting controlled waters) insofar as that section relates to the discharge of waste water from urban waste water treatment plants.

### **Discharges of industrial waste water to collecting systems or treatment plants**

7.—(1) It shall be the duty of each of the following, that is to say—

- (a) every sewerage undertaker;
- (b) the Director General of Water Services; and
- (c) the Secretary of State,

in exercising their functions under Chapter III of Part IV of the Water Industry Act 1991 (trade effluent) with respect to any discharge of industrial waste water, to secure that the requirements of Schedule 4 are met in respect of that discharge.

(2) Nothing in subsection (1) or (2) of section 121 of that Act (conditions of consent) shall be construed as restricting the power of a sewerage undertaker to impose in any consent under the said Chapter III such conditions as are necessary to comply with paragraph (1) above.

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(5) 1991 c. 57.

(3) Nothing in any agreement entered into between a sewerage undertaker or its predecessor and the owner or occupier of premises used for carrying on any trade or industry shall be treated as a consent or authorisation for the purposes of the said Chapter III unless the terms of that agreement are such as will secure that the requirements of Schedule 4 are met in respect of any discharge to which the agreement relates.

(4) Sewerage undertakers shall review, and if necessary modify, the consents or authorisations granted or deemed to be granted under the said Chapter III at regular intervals.

(5) For the purposes of complying with paragraph (1) above, a sewerage undertaker may vary any agreement under section 129 of the Water Industry Act 1991 which provides for the discharge of industrial waste water to an urban waste water treatment plant without first entering a public sewer, and any such agreement shall not be enforceable if and to the extent that it permits any discharge of industrial waste water in respect of which the requirements of Schedule 4 are not met.

(6) Nothing in the said Chapter III shall—

- (a) restrict the power of a sewerage undertaker or the Secretary of State to vary a consent or authorisation in pursuance of the duty imposed by this regulation; or
- (b) render a sewerage undertaker or the Secretary of State liable to pay compensation as a consequence of any such variation made in pursuance of that duty.

(7) The duty imposed on sewerage undertakers by this regulation shall be enforceable under section 18 of the Water Industry Act 1991 by the Director General of Water Services.

### **Discharges of certain industrial waste water into receiving waters**

8.—(1) This regulation applies to discharges of biodegradable industrial waste water from plants representing 4,000 p.e. or more belonging to the industrial sectors listed in Schedule 5 which does not enter urban waste water treatment plants before discharge to receiving waters.

(2) It shall be the duty of the Authority to impose, in every consent granted under Chapter II of Part III of the Water Resources Act 1991 (pollution offences) with respect to any discharge on or after 31st December 2000 to which this regulation applies (whether on the grant of consent or by notice under paragraph 6(2) of Schedule 10 to that Act), conditions which are appropriate to the nature of the industry concerned for the discharge of such waste water, and nothing in paragraph 7 of Schedule 10 to that Act shall restrict the power of the Authority to modify a consent in pursuance of the duty imposed by this paragraph.

(3) It shall be the duty of the Authority, in exercising its functions under section 28(3) and (4) of the Environmental Protection Act 1990<sup>(6)</sup> (authorisations under Part I of that Act and other statutory controls) (with respect to any process giving rise to a discharge to which this regulation applies, to secure that any authorisation granted in respect of that process includes conditions in respect of the discharge of such waste water on or after 31st December 2000 which are appropriate to the nature of the industry concerned.

(4) All lakes and ponds shall be treated as controlled waters for the purposes of the enactments mentioned in paragraphs (2) and (3) above insofar as they relate to discharges to which this regulation applies.

### **Dumping of sludge from ships**

9. It shall be the duty of the licensing authority (within the meaning of section 24 of the Food and Environment Protection Act 1985<sup>(7)</sup>), in the exercise of its functions under Part II of that Act (deposits in the sea), to secure that—

<sup>(6)</sup> 1990 c. 43.

<sup>(7)</sup> 1985 c. 48.

- (a) the dumping of sludge from ships to surface waters is phased out by 31st December 1998; and
- (b) the total amount of toxic, persistent or bioaccumulable materials in sludge so disposed of is licensed for disposal and progressively reduced in the period ending on that date.

### **Samples and records**

#### **10.—(1) In this regulation—**

- (a) a “relevant condition” means a condition imposed for the purposes of regulation 6(2) in a consent under Chapter II of Part III of the Water Resources Act 1991;
- (b) “the operator” means, in relation to a relevant condition, the person who operates the urban waste water treatment plant, discharges from which are authorised by the consent in which that condition is imposed.

(2) Where the operator is required by a relevant condition to provide any apparatus for the purpose of measuring or recording the volume, rate of flow, nature, composition or temperature of any waste water, or for the purpose of collecting samples of waste water, any such apparatus so provided shall be presumed to register accurately unless the contrary is shown.

#### **(3) Any record—**

- (a) produced by any such apparatus as is mentioned in paragraph (2) above; or
- (b) made by or on behalf of the operator in order to comply with a relevant condition,

shall be evidence of the matters appearing from the record and shall, in any proceedings under Chapter II of Part III of the Water Resources Act 1991, be admissible in evidence against the operator.

#### **(4) Where—**

- (a) an entry is required by a relevant condition to be made in any record as to the observance of that or any other relevant condition; and
- (b) the entry has not been made,

that fact shall be admissible as evidence that that condition or, as the case may be, that other condition has not been observed.

(5) Where, in compliance with a relevant condition, a sample of waste water is collected by apparatus installed for the purpose of collecting such samples automatically, the sample shall be treated, for the purpose of section 209 of the Water Resources Act 1991 (evidence of samples and abstractions), as being taken only at the time when it is removed from that apparatus.

(6) For the purposes of the said section 209, a sample of waste water which is taken and analysed by the operator in compliance with a relevant condition shall not be treated as being taken on behalf of the Authority.

### **Monitoring**

#### **11.—(1) It shall be the duty of the Authority—**

- (a) to monitor or procure the monitoring by a competent authority or appropriate body of discharges from urban waste water treatment plants to verify compliance with the relevant requirements of Part I of Schedule 3 in accordance with the control procedures set out in Part II of that Schedule;
- (b) to monitor or procure the monitoring by a competent authority or appropriate body of amounts and composition of sludges disposed of to surface waters (other than by means of dumping from ships);

- (c) to monitor or procure the monitoring by a competent authority or appropriate body of waters subject to discharges from urban waste water treatment plants provided in accordance with regulation 5 in cases where it can be expected that the receiving environment will be significantly affected;
  - (d) to carry out or procure the carrying out by a competent authority or appropriate body of monitoring and any other relevant studies to verify that discharges to which regulation 5(5) applies and the disposal of sludge to surface waters (other than by means of dumping from ships) do not adversely affect the environment.
- (2) It shall be the duty of the licensing authority (within the meaning of section 24 of the Food and Environment Protection Act 1985)—
- (a) to monitor or procure the monitoring by a competent authority or appropriate body of amounts and composition of sludges disposed of to surface waters by means of dumping from ships;
  - (b) to carry out or procure the carrying out by a competent authority or appropriate body of monitoring and any other relevant studies to verify that the disposal of sludge to surface waters by means of dumping from ships does not adversely affect the environment.
- (3) The Authority and the licensing authority shall retain any information collected by them or by a competent authority or appropriate body in complying with paragraph (1) or (2) above and shall make it available to the Secretary of State on request.

#### **Deposit of maps and certificates**

**12.** The Authority shall keep available at its principal office and at each of its principal regional offices, at all reasonable times, for inspection by the public free of charge—

- (a) the maps referred to in the definition of “estuary” in regulation 2(1);
- (b) the maps showing sensitive areas and high natural dispersion areas deposited with the Authority for the purposes of regulation 3;
- (c) particulars of certificates issued under regulation 4(3), 5(3) and 5(5)(b).

#### **Information and assistance required in connection with the control of pollution**

**13.** For the purposes of section 202 of the Water Resources Act 1991 (information and assistance required in connection with the control of pollution), the following obligations shall be treated as functions of the Secretary of State under the water pollution provisions of that Act:

- (a) the obligation under Article 16 of the Directive to publish every two years a situation report on the disposal of urban waste water and sludge in England and Wales;
- (b) the obligation under Article 17 of the Directive to establish, update and provide the Commission with information on a programme for the implementation of the Directive.

Signed by authority of the Secretary of State

2nd November 1994

*Robert Atkins*  
Minister of State,  
Department of the Environment



4th November 1994

*John Redwood*  
Secretary of State for Wales

## SCHEDULE 1

Regulation 3

### PART I

#### CRITERIA FOR IDENTIFICATION OF SENSITIVE AREAS

A water body must be identified as a sensitive area if it falls into one of the following groups:

- (a) natural freshwater lakes, other freshwater bodies, estuaries and coastal waters which are found to be eutrophic or which in the near future may become eutrophic if protective action is not taken.

The following elements might be taken into account when considering which nutrient should be reduced by further treatment:

- (i) lakes and streams reaching lakes/reservoirs/closed bays which are found to have a poor water exchange, whereby accumulation may take place. In these areas, the removal of phosphorus should be included unless it can be demonstrated that the removal will have no effect on the level of eutrophication. Where discharges from large agglomerations are made, the removal of nitrogen may also be considered;
- (ii) estuaries, bays and other coastal waters which are found to have a poor water exchange, or which receive large quantities of nutrients. Discharges from small agglomerations are usually of minor importance in those areas, but for large agglomerations, the removal of phosphorus and/or nitrogen should be included unless it can be demonstrated that the removal will have no effect on the level of eutrophication;
- (b) surface freshwaters intended for the abstraction of drinking water which could contain more than the concentration of nitrate laid down under the relevant provisions of Council Directive [75/440/EEC](#) of 16th June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States<sup>(8)</sup> if action is not taken;
- (c) areas where further treatment than secondary or equivalent treatment is necessary to fulfil Council Directives.

### PART II

#### CRITERIA FOR IDENTIFICATION OF HIGH NATURAL DISPERSION AREAS

A marine water body or area can be identified as a high natural dispersion area if the discharge of waste water does not adversely affect the environment as a result of morphology, hydrology or specific hydraulic conditions which exist in that area.

When identifying high natural dispersion areas, the Secretary of State shall take into account the risk that the discharged load may be transferred to adjacent areas where it can cause detrimental environmental effects. The Secretary of State shall recognise the presence of sensitive areas outside England and Wales.

The following elements shall be taken into consideration when identifying high natural dispersion areas:

- open bays, estuaries and other coastal waters with a good water exchange and not subject to eutrophication or oxygen depletion or which are considered unlikely to become eutrophic or to develop oxygen depletion due to the discharge of urban waste water.

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<sup>(8)</sup> OJ No. L 194, 25.7.75, p. 26; as amended by Directive [79/869/EEC](#) (OJ No. L 271, 29.10.79, p. 44).

## SCHEDULE 2

Regulation 4

## REQUIREMENTS FOR COLLECTING SYSTEMS

1. Collecting systems shall take into account waste water treatment requirements.
2. The design, construction and maintenance of collecting systems shall be undertaken in accordance with the best technical knowledge not entailing excessive costs, notably regarding—
  - (a) volume and characteristics of urban waste water;
  - (b) prevention of leaks;
  - (c) limitation of pollution of receiving waters due to storm water overflows.

## SCHEDULE 3

Regulations 5, 6 and 11

## PART I

## REQUIREMENTS FOR DISCHARGES FROM TREATMENT PLANTS

1. Treatment plants shall be designed or modified so that representative samples of the incoming waste water and of treated effluent can be obtained before discharge to receiving waters.
2. Discharges from urban waste water treatment plants subject to treatment in accordance with regulation 5(1) and (2) shall, subject to paragraphs 4 and 5 of Part II of this Schedule, meet the requirements shown in Table 1 below.
3. Discharges from urban waste water treatment plants to those sensitive areas which are subject to eutrophication as identified in sub-paragraph (a) of Part I of Schedule 1 shall, subject to paragraphs 4 and 5 of Part II of this Schedule, also meet the requirements in Table 2 below.
4. More stringent requirements than those shown in Table 1 and/or Table 2 shall be applied where required to ensure that the receiving waters satisfy any other relevant Community Directives.
5. The points of discharge of urban waste water shall be chosen, as far as possible, so as to minimise the effects on receiving waters.

TABLE 1

REQUIREMENTS FOR DISCHARGES FROM URBAN WASTE WATER  
TREATMENT PLANTS SUBJECT TO REGULATION 5(1) AND (2)

The values for concentration or for the percentage of reduction shall apply.

Parameters	Concentration	Minimum percentage of reduction <sup>1</sup>	Reference method of measurement
Biochemical oxygen demand (BOD <sub>5</sub> at 20°C without nitrification <sup>2</sup>	25 mg/l O <sub>2</sub>	70—90	Homogenized, unfiltered, undecanted sample. Determination of dissolved oxygen before and after five-
<ol style="list-style-type: none"> <li>1 Reduction in relation to the load of the influent.</li> <li>2 The parameter can be replaced by another parameter: total organic carbon (TOC) or total oxygen demand (TOD) if a relationship can be established between BOD<sub>5</sub> and the substitute parameter.</li> </ol>			

**Status:** This is the original version (as it was originally made).

Parameters	Concentration	Minimum percentage of reduction <sup>1</sup>	Reference method of measurement
Chemical oxygen demand (COD)	125 mg/l O <sub>2</sub>	75	day incubation at 20° ±1°C, in complete darkness. Addition of a nitrification inhibitor  Homogenized, unfiltered, undecanted sample Potassium dichromate
<p>1 Reduction in relation to the load of the influent.</p> <p>2 The parameter can be replaced by another parameter: total organic carbon (TOC) or total oxygen demand (TOD) if a relationship can be established between BOD5 and the substitute parameter.</p>			

Analyses concerning discharges from lagooning shall be carried out on filtered samples; however, the concentration of total suspended solids in unfiltered water samples shall not exceed 150 mg/l.

**TABLE 2**

REQUIREMENTS FOR DISCHARGES FROM URBAN WASTE WATER TREATMENT PLANTS TO SENSITIVE AREAS WHICH ARE SUBJECT TO EUTROPHICATION AS IDENTIFIED IN SUB-PARAGRAPH (a) OF PART I OF SCHEDULE 1

One or both parameters may be applied depending on the local situation. The values for concentration or for the percentage of reduction shall apply.

Parameters	Concentration	Minimum percentage of reduction <sup>1</sup>	Reference method of measurement
Total phosphorus	2 mg/l P (10,000—100,000 p.e.) 1 mg/l P (more than 100,000 p.e.)	80	Molecular absorption spectrophotometry
Total nitrogen <sup>2</sup>	15 mg/l N (10,000—100,000 p.e.) 10 mg/l N (more than 100,000 p.e.)	70—80	Molecular absorption spectrophotometry
<p>1 Reduction in relation to the load of the influent.</p> <p>2 Total nitrogen means: the sum of total Kjeldahl-nitrogen (organic N + NH<sub>3</sub>), nitrate (NO<sub>3</sub>)-nitrogen and nitrite (NO<sub>2</sub>)-nitrogen.</p>			

## PART II

### REFERENCE METHODS FOR MONITORING AND EVALUATION OF RESULTS

- (a) (a) The Authority shall apply a monitoring method which corresponds at least with the level of requirements described below.
- (b) Alternative methods to those mentioned in paragraphs 2, 3 and 4 may be used provided that it can be demonstrated that equivalent results are obtained.
- (c) The Authority shall provide the Secretary of State with all relevant information concerning the applied method.

- (a) (a) Flow-proportional or time-based 24-hour samples shall be collected at the same welldefined point in the outlet and if necessary in the inlet of the treatment plant in order to monitor compliance with the requirements for discharged waste water laid down in these Regulations.
  - (b) Good international laboratory practices aiming at minimising the degradation of samples between collection and analysis shall be applied.
- 3.** The minimum annual number of samples shall be determined according to the size of the treatment plant and be collected at regular intervals during the year:

— 2,000 to 9,999 p.e.:	12 samples during the first year; four samples in subsequent years, if it can be shown that the water during the first year complies with the provisions of these Regulations; if one sample of the four fails, 12 samples must be taken in the year that follows;
— 10,000 to 49,999 p.e.:	12 samples;
— 50,000 p.e. or over:	24 samples.

**4.** The treated waste water shall be assumed to conform to the relevant parameters if, for each relevant parameter considered individually, samples of the water show that it complies with the relevant parametric value in the following way:

- (a) for the parameters specified in Table 1 and sub-paragraph (b) of regulation 5(8), a maximum number of samples which are allowed to fail the requirements, expressed in concentrations and/or percentage reductions in that Table and that sub-paragraph, is specified in Table 3;
- (b) for the parameters of Table 1 expressed in concentrations, the failing samples taken under normal operating conditions must not deviate from the parametric values by more than 100%;
- (c) for those parameters specified in Table 2 the annual mean of the samples for each parameter shall conform to the relevant parametric values.

**5.** Extreme values for the water quality in question shall not be taken into consideration when they are the result of unusual situations such as those due to heavy rain.

**TABLE 3**

Series of samples taken in any year	Maximum permitted number of samples which fail to conform
4—7	1
8—16	2
17—28	3
29—40	4
41—53	5
54—67	6
68—81	7

**Status:** This is the original version (as it was originally made).

Series of samples taken in any year	Maximum permitted number of samples which fail to conform
82—95	8
96—110	9
111—125	10
126—140	11
141—155	12
156—171	13
172—187	14
188—203	15
204—219	16
220—235	17
236—251	18
252—268	19
269—284	20
285—300	21
301—317	22
318—334	23
335—350	24
351—365	25

#### SCHEDULE 4

Regulation 7

##### INDUSTRIAL WASTE WATER

Industrial waste water entering collecting systems and urban waste water treatment plants shall be subject to such pre-treatment as is required in order to—

- protect the health of staff working in collecting systems and treatment plants;
- ensure that collecting systems, waste water treatment plants and associated equipment are not damaged;
- ensure that the operation of the waste water treatment plant and the treatment of sludge are not impeded;
- ensure that discharges from the treatment plants do not adversely affect the environment, or prevent receiving water from complying with other Community Directives;
- ensure that sludge can be disposed of safely in an environmentally acceptable manner.

## SCHEDULE 5

Regulation 8

### INDUSTRIAL SECTORS REFERRED TO IN REGULATION 8

1. Milk processing.
  2. Manufacture of fruit and vegetable products.
  3. Manufacture and bottling of soft drinks.
  4. Potato processing.
  5. Meat industry.
  6. Breweries.
  7. Production of alcohol and alcoholic beverages.
  8. Manufacture of animal feed from plant products.
  9. Manufacture of gelatine and of glue from hides, skin and bones.
  10. Malt-houses.
  11. Fish-processing industry.
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### EXPLANATORY NOTE

*(This note is not part of the Regulations)*

These Regulations implement, as respects England and Wales, Council Directive [91/271/EEC](#) concerning urban waste water treatment.

Regulation 4 supplements the general duty imposed on sewerage undertakers by section 94 of the Water Industry Act 1991, by requiring them to secure that “collecting systems” (this and other expressions are defined in regulation 2(1)) are provided by specified dates, and to secure that urban waste water entering collecting systems is subject to treatment provided in accordance with regulation 5. Regulation 5 requires such treatment to be provided by specified dates and, with regulation 6(1) and Part I of Schedule 3, prescribes the standard of treatment required. The specified date and the standard of treatment are determined according to the size of the “agglomeration” from which the waste water emanates and the nature of the waters into which the treated waste water is discharged. Generally, “secondary treatment” is required, but more stringent treatment is required for waters identified as “sensitive areas” and less stringent treatment is permissible for waters identified as “high natural dispersion areas”. The areas identified as sensitive areas and high natural dispersion areas are shown on maps deposited with the National Rivers Authority (“NRA”); the Secretary of State is under a duty to review the identification of these areas at least every four years (regulation 3). Discharges from smaller agglomerations need be subjected only to “appropriate treatment”.

Regulation 6 also requires the NRA to secure, by means of its powers to grant and modify discharge consents under Chapter II of Part III of the Water Resources Act 1991, that the relevant requirements of the Regulations in relation to discharges are satisfied.

Regulation 7 imposes requirements in respect of discharges of industrial waste water to collecting systems or treatment plants. Sewerage undertakers are empowered to modify trade effluent consents and agreements for this purpose.

Regulation 8 imposes a duty on the NRA to secure that direct discharges on and after 31st December 2000 of biodegradable industrial waste water from the industrial sectors listed in Schedule 5 are subject to conditions appropriate to the nature of the industry concerned.

Regulation 9 requires the phasing out of the dumping of sludge from ships by 31st December 1998, and the progressive reduction before that date of the total amount of toxic, persistent and bioaccumulable materials in sludge so dumped.

Regulation 11 imposes a duty on the NRA to ensure that monitoring of discharges and waters to which the Regulations apply, and such other studies as are required by the Regulations, are carried out. The requirements as to monitoring of discharges are set out in Part II of Schedule 3, and regulation 10 makes provision in connection with samples and records obtained in accordance with those requirements.

Regulation 12 requires the NRA to keep certain documents available for inspection by the public, and regulation 13 enables the Secretary of State to require information to be furnished to him for the purpose of enabling him to comply with certain requirements of the Directive.

A compliance cost assessment in respect of these Regulations may be obtained from Water Directorate, Department of the Environment, Romney House, 43 Marsham Street, London SW1P 3PY, or Environment Division, Welsh Office, Cathays Park, Cardiff CF1 3NQ.