SCHEDULE 1 regulations 2 and 4

PRESCRIBED CONCENTRATIONS AND VALUES

**TABLE A**

MICROBIOLOGICAL PARAMETERS

**Part I: Directive requirements**

| *Item* | *Parameters* | *Concentration or Value maximum)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 1. | Enterococci | 0 | number/100ml | Consumers' taps |
| 2. | *Escherichia coli (E. coli)* | 0 | number/100ml | Consumers' taps |

**Part II: National requirements**

| *Item* | *Parameters* | *Concentration or Value maximum)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 1. | Coliform bacteria | 0 | number/100ml | Service reservoirs* and water treatment works |
| 2. | *Escherichia coli (E. coli)* | 0 | number/100ml | Service reservoirs and water treatment works |

*Note:*
* Compliance required as to 95% of samples from each service reservoir (regulation 4(6)).

**TABLE B**

CHEMICAL PARAMETERS

**Part I: Directive requirements**

| *Item* | *Parameters* | *Concentration or Value maximum)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 1. | Acrylamide | 0.10 | µg/l | (i) |
| 2. | Antimony | 5.0 | µgSb/l | Consumers' taps |
| 3. | Arsenic | 10 | µgAs/l | Consumers' taps |
| 4. | Benzene | 1.0 | µg/l | Consumers' taps |
| 5. | Benzo(a)pyrene | 0.010 | µg/l | Consumers' taps |
| 6. | Boron | 1.0 | mgB/l | Consumers' taps |
| 7. | Bromate | 10 | µg$BrO_3$/l | Consumers' taps |
| 8. | Cadmium | 5.0 | µgCd/l | Consumers' taps |

| *Item* | *Parameters* | *Concentration or Value maximum)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 9. | Chromium | 50 | µgCr/l | Consumers' taps |
| 10. | Copper[ii] | 2.0 | mgCu/l | Consumers' taps |
| 11. | Cyanide | 50 | µgCN/l | Consumers' taps |
| 12. | 1, 2 dichloroethane | 3.0 | µg/l | Consumers' taps |
| 13. | Epichlorohydrin | 0.10 | µg/l | [i] |
| 14. | Fluoride | 1.5 | mgF/l | Consumers' taps |
| 15. | Lead [ii] | (a) 25, from 25th December 2003 until immediately before 25th December 2013 | µgPb/l | Consumers' taps |
| | | (b) 10, on and after 25th December 2013 | µgPb/l | Consumers' taps |
| 16. | Mercury | 1.0 | µgHg/l | Consumers' taps |
| 17. | Nickel [ii] | 20 | µgNi/l | Consumers' taps |
| 18. | Nitrate [iii] | 50 | mg$NO_3$/l | Consumers' taps |
| 19. | Nitrite [iii] | 0.50 | mg$NO_2$/l | Consumers' taps |
| | | 0.10 | | Treatment works |
| 20. | Pesticides [iv][v] | | | |
| | Aldrin | 0.030 | µg/l | Consumers' taps |
| | Dieldrin | | | |
| | Heptachlor | | | |
| | Heptachlor epoxide | | | |
| | other pesticides | 0.10 | µg/l | Consumers' taps |
| 21. | Pesticides: Total [vi] | 0.50 | µg/l | Consumers' taps |
| 22. | Polycyclic aromatic hydrocarbons [vii] | 0.10 | µg/l | Consumers' taps |
| 23. | Selenium | 10 | µgSe/l | Consumers' taps |
| 24. | Tetrachloroethene and Trichloroethene [viii] | 10 | µg/l | Consumers' taps |

| *Item* | *Parameters* | *Concentration or Value maximum)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 25. | Trihalomethanes: Total [(ix)] | 100 | µg/l | Consumers' taps |
| 26. | Vinyl chloride | 0.50 | µg/l | [(i)] |

*Notes:*

**(i)** The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water. This is controlled by product specification.

**(ii)** *See also* regulation 6(6).

**(iii)** *See also* regulation 4(2)(d).

**(iv)** *See* the definition of "pesticides and related products" in regulation 2.

**(v)** The parametric value applies to each individual pesticide.

**(vi)** "Pesticides: Total" means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure.

**(vii)** The specified compounds are:
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- benzo(ghi)perylene
- indeno(1,2,3-cd)pyrene.

The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

**(viii)** The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

**(ix)** The specified compounds are:
- chloroform
- bromoform
- dibromochloromethane
- bromodichloromethane.

The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

## Part II: National requirements

| *Item* | *Parameters* | *Concentration or Value (maximum unless otherwise stated)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 1. | Aluminium | 200 | µgAl/l | Consumers' taps |
| 2. | Colour | 20 | mg/l Pt/Co | Consumers' taps |
| 3. | Hydrogen ion | 10.0 | pH value | Consumers' taps |
| | | 6.5 (minimum) | pH value | |
| 4. | Iron | 200 | µgFe/l | Consumers' taps |
| 5. | Manganese | 50 | µgMn/l | Consumers' taps |
| 6. | Odour | 3 at 25°C | Dilution number | Consumers' taps |
| 7. | Sodium | 200 | mgNa/l | Consumers' taps |
| 8. | Taste | 3 at 25°C | Dilution number | Consumers' taps |
| 9. | Tetrachloromethane | 3 | µg/l | Consumers' taps |

| *Item* | *Parameters* | *Concentration or Value (maximum unless otherwise stated)* | *Units of Measurement* | *Point of compliance* |
|---|---|---|---|---|
| 10. | Turbidity | 4 | NTU | Consumers' taps |

## SCHEDULE 2

regulations 2 and 4

## INDICATOR PARAMETERS

| *Item* | *Parameters* | *Specification Concentration or Value (maximum) or State* | *Units of Measurement* | *Point of monitoring* |
|---|---|---|---|---|
| 1. | Ammonium | 0.50 | mgNH4/l | Consumers' taps |
| 2. | Chloride **(i)** | 250 | mgCl/l | Supply point* |
| 3. | *Clostridium perfringens* (including spores) | 0 | Number/100ml | Supply point* |
| 4. | Coliform bacteria | 0 | Number/100ml | Consumers' taps |
| 5. | Colony counts | No abnormal change | Number/1ml at 22°C | Consumers' taps, service reservoirs and treatment works |
| 5. | Colony counts | No abnormal change | Number/1ml at 37°C | Consumers' taps, service reservoirs and treatment works |
| 6. | Conductivity **(i)** | 2500 | µS/cm at 20°C | Supply point* |
| 7. | Sulphate **(i)** | 250 | mg$SO_4$/l | Supply point* |
| 8. | Total indicative dose (for radioactivity) **(ii)** | 0.10 | mSv/year | Supply point* |
| 9. | Total organic carbon (TOC) | No abnormal change | mgC/l | Supply point* |
| 10. | Tritium (for radioactivity) | 100 | Bq/l | Supply point* |

*Notes:*

**(i)** The water should not be aggressive.

**(ii)** Excluding tritium, potassium−40, radon and radon decay products.

* May be monitored from samples of water leaving treatment works or other supply point, as no significant change during distribution.

| *Item* | *Parameters* | *Specification Concentration or Value (maximum) or State* | *Units of Measurement* | *Point of monitoring* |
|---|---|---|---|---|
| 11. | Turbidity | 1 | NTU | Treatment works |

*Notes:*

**(i)** The water should not be aggressive.

**(ii)** Excluding tritium, potassium−40, radon and radon decay products.

* May be monitored from samples of water leaving treatment works or other supply point, as no significant change during distribution.

SCHEDULE 3 Part IV

MONITORING

**TABLE 1**

PARAMETERS AND CIRCUMSTANCES FOR CHECK MONITORING

| (1)<br>*Item* | (2)<br>*Parameter* | (3)<br>*Circumstances* |
|---|---|---|
| 1. | Aluminium | When used as flocculant or where the water originates from, or is influenced by, surface waters |
| 2. | Ammonium | |
| 3. | *Clostridium perfringens* (including spores) | Where the water originates from, or is influenced by, surface waters |
| 4. | Coliform bacteria | |
| 5. | Colour | |
| 6. | Conductivity | |
| 7. | *Escherichia coli (E. coli)* | |
| 8. | Hydrogen ion concentration | |
| 9. | Iron | When used as flocculant or where the water originates from, or is influenced by, surface waters |
| 10. | Manganese | Where the water originates from, or is influenced by, surface waters |
| 11. | Nitrate | When chloramination is practised |

| (1)<br>*Item* | (2)<br>*Parameter* | (3)<br>*Circumstances* |
|---|---|---|
| 12. | Nitrite | When chloramination is practised |
| 13. | Odour | |
| 14. | Taste | |
| 15. | Turbidity | |

**TABLE 2**

ANNUAL SAMPLING FREQUENCIES: WATER SUPPLY ZONES

| (1)<br>*Substances and parameters subject to check monitoring* | (2)<br>*Estimated population of water supply zone* | (3)<br>*Reduced* | (4)<br>*Standard* |
|---|---|---|---|
| *E. coli* | <100 | | 4 |
| Coliform bacteria<br>Residual disinfectant | >–100 | | 12 per 5,000 population [(i)] |
| Aluminium | | | |
| Ammonium | | | |
| *Clostridium perfringens* | | | |
| Colony counts | <100 | 1 | 2 |
| Colour | 100–4,999 | 2 | 4 |
| Conductivity[*] | 5,000–9,999 | 6 | 12 |
| Hydrogen ion | 10,000–29,999 | 12 | 24 |
| Iron | 30,000–49,999 | 18 | 36 |
| Manganese | 50,000–79,999 | 26 | 52 |
| Nitrate [(ii)] | 80,000–99,999 | 38 | 76 |
| Nitrite [(ii)] | | | |
| Odour | | | |

*Notes:*

***** Sampling for these parameters may be within water supply zones or at supply points as specified in Table 3, subject to notes (ii) and **(iii)** below.

**(i)** Where the population is not an exact multiple of 5,000, the population figure should be rounded up to the nearest multiple of 5,000.

**(ii)** Check monitoring in water supply zones is required only where chloramination is practised. In other circumstances audit monitoring is required.

**(iii)** Audit monitoring in water supply zones is required only where sodium hypochlorite is added after water has left the treatment works. In other circumstances, audit monitoring is required at supply points.

**(iv)** To monitor for total indicative dose (for radioactivity).

| (1)<br>*Substances and parameters subject to check monitoring* | (2)<br>*Estimated population of water supply zone* | (3)<br>*Reduced* | (4)<br>*Standard* |
|---|---|---|---|
| Taste | | | |
| Turbidity | | | |
| *Parameters subject to audit monitoring* | | | |
| Aluminium | | | |
| Antimony | | | |
| Arsenic | | | |
| Benzene* | <100 | | 1 |
| Benzo(a)pyrene | 100–4,999 | | 4 |
| Boron* | 5,000–99,999 | | 8 |
| Bromate (iii) | | | |
| Cadmium | | | |
| Chromium | | | |
| Copper | | | |
| Cyanide* | | | |
| 1,2 dichloroethane* | | | |
| Enterococci | | | |
| Fluoride* | | | |
| Iron | | | |
| Lead | | | |
| Manganese | | | |
| Mercury* | | | |
| Nickel | | | |
| Nitrate (ii) | | | |
| Nitrite (ii) | | | |

*Notes:*

***** Sampling for these parameters may be within water supply zones or at supply points as specified in Table 3, subject to notes (ii) and **(iii)** below.

**(i)** Where the population is not an exact multiple of 5,000, the population figure should be rounded up to the nearest multiple of 5,000.

**(ii)** Check monitoring in water supply zones is required only where chloramination is practised. In other circumstances audit monitoring is required.

**(iii)** Audit monitoring in water supply zones is required only where sodium hypochlorite is added after water has left the treatment works. In other circumstances, audit monitoring is required at supply points.

**(iv)** To monitor for total indicative dose (for radioactivity).

| (1)<br>*Substances and parameters subject to check monitoring* | (2)<br>*Estimated population of water supply zone* | (3)<br>*Reduced* | (4)<br>*Standard* |
|---|---|---|---|
| Pesticides and related products* | <100 | | 1 |
| | 100–4,999 | | 4 |
| Polycyclic aromatic hydrocarbons | 5,000–99,999 | | 8 |
| Selenium | | | |
| Sodium | | | |
| Trichloroethene/ Tetrachloroethene* | | | |
| Trihalomethanes | | | |
| Chloride* | | | |
| Sulphate* | | | |
| Total organic carbon* | | | |
| Tritium* | | | |
| Gross alpha*(iv) | | | |
| Gross beta*(iv) | | | |

*Notes:*

***** Sampling for these parameters may be within water supply zones or at supply points as specified in Table 3, subject to notes (ii) and **(iii)** below.

**(i)** Where the population is not an exact multiple of 5,000, the population figure should be rounded up to the nearest multiple of 5,000.

**(ii)** Check monitoring in water supply zones is required only where chloramination is practised. In other circumstances audit monitoring is required.

**(iii)** Audit monitoring in water supply zones is required only where sodium hypochlorite is added after water has left the treatment works. In other circumstances, audit monitoring is required at supply points.

**(iv)** To monitor for total indicative dose (for radioactivity).

**TABLE 3**

ANNUAL SAMPLING FREQUENCIES: TREATMENT WORKS OR SUPPLY POINTS()

| (1) *Item* | (2) *Substances and parameters* | (3) *Volume of water supplied $m^3/d$* | (4) *Reduced* | (5) *Standard* |
|---|---|---|---|---|
| 1. | *E. coli* | <20 | | 4 |
| 2. | Coliform bacteria | 20–1,999 | 12 | 52 |
| 3. | Colony counts | 2,000–5,999 | 52 | 104 |
| 4. | Nitrite [(ii)] | 6,000–11,999 | 104 | 208 |
| 5. | Residual disinfectant | >12,000 | 104 | 365 |
| 6. | Turbidity | | | |
| *Subject to check monitoring* | | | | |
| 7. | *Clostridium perfringens*[(i)] | <20 | | 2 |
| | | 20–999 | 2 | 4 |
| 8. | Conductivity | 1,000–1,999 | 6 | 12 |
| | | 2,000–5,999 | 12 | 24 |
| | | 6,000–9,999 | 18 | 36 |
| | | 10,000–15,999 | 26 | 52 |
| | | 16,000–32,999 | 52 | 104 |
| | | 33,000–49,999 | 78 | 156 |
| | | 50,000–67,999 | 104 | 208 |
| | | 68,000–84,999 | 130 | 260 |
| | | 85,000–101,999 | 156 | 312 |
| | | 102,000–119,999 | 183 | 365 |
| | | 120,000–241,999 | 365 | 730 |
| | | 242,000–484,999 | 730 | 1,460 |
| | | 485,000–728,999 | 1,095 | 2,190 |

*Notes:*

* Sampling is at treatment works for the substances and parameters shown in column (1) of the Table as items 1 to 6 and at supply points for the other substances and parameters, subject to notes **(ii)** and **(iii)** below.

**(i)** Check monitoring is required only in respect of surface waters (see regulation 6(2) and Table 1 in Schedule 3).

**(ii)** Check monitoring at treatment works is required only when chloramination is practised. In other circumstances, audit monitoring is required.

**(iii)** Audit monitoring at supply points is required only where sodium hypochlorite is not added after water has left the treatment works. In other circumstances, audit monitoring is required in water supply zones.

**(iv)** To monitor for total indicative dose (for radioactivity).

()

| (1)<br>*Item* | (2)<br>*Substances and parameters* | (3)<br>*Volume of water supplied $m^3/d$* | (4)<br>*Reduced* | (5)<br>*Standard* |
|---|---|---|---|---|
| *Subject to audit monitoring* | | | | |
| 9. | Benzene | | | |
| 10. | Boron | | | |
| 11. | Bromate [(iii)] | | | |
| 12. | Cyanide | | | |
| 13. | 1,2 dichloroethane | | | |
| 14. | Fluoride | | | |
| 15. | Mercury | <20 | | 1 |
| 16. | Nitrite [(ii)] | 20–999 | | 4 |
| 17. | Pesticides and | 1,000–49,999 | | 8 |
| | related products | 50,000–89,999 | | 12 |
| | | 90,000–299,999 | | 24 |
| | | 300,000–649,999 | | 36 |
| 18. | Trichloroethene/ Tetrachloroethene | >–650,000 | | 48 |
| 19. | Tetrachloromethane | | | |
| 20. | Chloride | | | |
| 21. | Sulphate | | | |
| 22. | Total organic carbon | | | |
| 23. | Tritium | | | |
| 24. | Gross alpha [(iv)] | | | |
| 25. | Gross beta [(iv)] | | | |

*Notes:*

***** Sampling is at treatment works for the substances and parameters shown in column (1) of the Table as items 1 to 6 and at supply points for the other substances and parameters, subject to notes **(ii)** and **(iii)** below.

**(i)** Check monitoring is required only in respect of surface waters (see regulation 6(2) and Table 1 in Schedule 3).

**(ii)** Check monitoring at treatment works is required only when chloramination is practised. In other circumstances, audit monitoring is required.

**(iii)** Audit monitoring at supply points is required only where sodium hypochlorite is not added after water has left the treatment works. In other circumstances, audit monitoring is required in water supply zones.

**(iv)** To monitor for total indicative dose (for radioactivity).

SCHEDULE 4 regulation 16

ANALYTICAL METHODOLOGY

**TABLE A1**

PARAMETERS FOR WHICH, SUBJECT TO REGULATION 16(7),METHODS OF ANALYSIS ARE PRESCRIBED

| (1)<br>*Parameter* | (2)<br>*Method* |
|---|---|
| *Clostridium perfringens* (including spores) | Membrane filtration followed by anaerobic incubation of the membrane on m-CP agar* at 44 ± 1°C for 21 ± 3 hours. Count opaque yellow colonies that turn pink or red after exposure to ammonium hydroxide vapours for 20 to 30 seconds. |
| Coliform bacteria | ISO 9308-1 |
| Colony count 22°C-enumeration of culturable microorganisms | PrEN ISO 6222 |
| Colony count 37°C-enumeration of culturable microoganisms | prEN ISO 6222 |
| Enterococci | ISO 7899-2 |
| *Escherichia coli (E. coli)* | ISO 9308-1 |

* The composition of m-CP agar is:

| | |
|---|---|
| Basal medium | |
| Tryptose | 30.0g |
| Yeast extract | 20.0g |
| Sucrose | 5.0g |
| L-cysteine hydrochloride | 1.0g |
| $MgSO_4.7H_2O$ | 0.1g |
| Bromocresol purple | 40.0mg |
| Agar | 15.0g |
| Water | 1,000.0ml |

Dissolve the ingredients of the basal medium, adjust pH to 7.6 and autoclave at 121°C for 15 minutes. Allow the medium to cool and add:

| | |
|---|---|
| D-cycloserine | 400.0mg |
| Polymyxine-B sulphate | 25.0mg |
| Indoxyl-β-D-glucoside | 60.0mg |
| to be dissolved in 8ml sterile water before addition | |
| Filter-sterilised 0.5% phenolphthalein diphosphate solution | 20.0ml |
| Filter-sterilised 4.5% $FeCl_3.6H_2O$ | 2.0ml |

## TABLE A2

PARAMETERS IN RELATION TO WHICH METHODS OF ANALYSIS MUSTSATISFY PRESCRIBED CHARACTERISTICS

| (1) *Parameters* | (2) *Trueness % of prescribed concentration or value or specification* | (3) *Precision % of prescribed concentration or value or specification* | (4) *Limit of detection % of prescribed concentration or value or specification* |
|---|---|---|---|
| Aluminium | 10 | 10 | 10 |
| Ammonium | 10 | 10 | 10 |
| Antimony | 25 | 25 | 25 |
| Arsenic | 10 | 10 | 10 |
| Benzene | 25 | 25 | 25 |
| Benzo(a)pyrene | 25 | 25 | 25 |
| Boron | 10 | 10 | 10 |
| Bromate | 25 | 25 | 25 |
| Cadmium | 10 | 10 | 10 |
| Chloride | 10 | 10 | 10 |
| Chromium | 10 | 10 | 10 |
| Colour | 10 | 10 | 10 |
| Conductivity | 10 | 10 | 10 |
| Copper | 10 | 10 | 10 |
| Cyanide [(i)] | 10 | 10 | 10 |
| 1,2-dichloroethane | 25 | 25 | 10 |
| Fluoride | 10 | 10 | 10 |
| Iron | 10 | 10 | 10 |
| Lead | 10 | 10 | 10 |
| Manganese | 10 | 10 | 10 |
| Mercury | 20 | 10 | 20 |
| Nickel | 10 | 10 | 10 |

Notes:

**(i)** The method of analysis should determine total cyanide in all forms.

**(ii)** The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.

**(iii)** The performance characteristics apply to the individual substances specified at 25% of the parametric value in Part I of Table B in Schedule 1.

**(iv)** The performance characteristics apply to the individual substances specified at 50% of the parametric value in Part I of Table B in Schedule 1.

**(v)** The performance characteristics apply to the prescribed value of 4 NTU.

**(vi)** The performance characteristics apply to the specification of 1 NTU for water leaving treatment works.

| (1)<br>*Parameters* | (2)<br>*Trueness % of prescribed concentration or value or specification* | (3)<br>*Precision % of prescribed concentration or value or specification* | (4)<br>*Limit of detection % of prescribed concentration or value or specification* |
|---|---|---|---|
| Nitrate | 10 | 10 | 10 |
| Nitrite | 10 | 10 | 10 |
| Pesticides and related products [(ii)] | 25 | 25 | 25 |
| Polycyclic aromatic hydrocarbons [(iii)] | 25 | 25 | 25 |
| Selenium | 10 | 10 | 10 |
| Sodium | 10 | 10 | 10 |
| Sulphate | 10 | 10 | 10 |
| Tetrachloroethene [(iv)] | 25 | 25 | 10 |
| Tetrachloromethane | 20 | 20 | 20 |
| Trichloroethene [(iv)] | 25 | 25 | 10 |
| Trihalomethanes: Total [(iii)] | 25 | 25 | 10 |
| Turbidity [(v)] | 10 | 10 | 10 |
| Turbidity [(vi)] | 25 | 25 | 25 |

Notes:

**(i)** The method of analysis should determine total cyanide in all forms.

**(ii)** The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.

**(iii)** The performance characteristics apply to the individual substances specified at 25% of the parametric value in Part I of Table B in Schedule 1.

**(iv)** The performance characteristics apply to the individual substances specified at 50% of the parametric value in Part I of Table B in Schedule 1.

**(v)** The performance characteristics apply to the prescribed value of 4 NTU.

**(vi)** The performance characteristics apply to the specification of 1 NTU for water leaving treatment works.

## SCHEDULE 5

regulation 40

### AMENDMENT OF THE WATER SUPPLY(WATER QUALITY) REGULATIONS 1989

The amendments to the 1989 Regulations referred to in regulation 40 are—

(a) after regulation 13, the insertion of the following regulation—

"**Frequency of sampling for particular organisms and substances**

**13A.**—(1) Subject to paragraphs (5) and (6), in each of the years 2001, 2002 and 2003, a water undertaker shall take, or cause to be taken, from its sampling points or, as the case

may be, its supply points, for analysis for testing against the concentrations and values specified in column (2) of Table 4A for the organisms and substances listed in column (1) of that Table, not less than the number of samples specified in paragraphs (2) and (3).

(2) In respect of supply points and the supply of a volume of water within a range shown in column (3) of that Table, the number is that shown in column (4) of that Table with the prefix "S" as applicable to a volume within that range.

(3) In respect of sampling points and the supply of water to an estimated population within a range shown in column (5) of that Table, the number is that shown in column (6) of that Table with the prefix "S" as applicable to a population within that range.

(4) In each of those years samples shall be taken at regular intervals throughout the year.

(5) Where—

(a) a programme of work has been approved or is treated as approved under regulation 41 (transitional provision: programmes of work) of the Water Supply (Water Quality) Regulations 2000; or has otherwise been agreed by the Secretary of State; and

(b) at least one of the steps required to be taken in accordance with that programme—

(i) relates to an organism or substance listed in column (1) of Table 4A; and

(ii) remains to be completed,

the number of samples to be taken in any period of twelve months beginning with the date on which the programme was approved, treated as approved, or agreed (as the case may be) and ending on the day on which the last of those steps is completed, for analysis for testing for that organism or substance, may be the number shown in column (4) or, as the case may be, column (6) of that Table with the prefix "R".

(6) Where analysis of the samples taken by a water undertaker in 2001 or 2002 in accordance with this regulation has established a concentration or value in respect of an organism or substance listed in column (1) of Table 4A that is significantly lower than the prescribed concentration or value, the number of samples to be taken in 2002 or 2003, respectively, for analysis for testing for that organism or substance, may be the number shown in column (4) or, as the case may be, column (6) of that Table with the prefix "R".";

(b) after regulation 20, the insertion of the following regulation—

"**Additional testing for particular parameters**

**20A.** The samples taken in accordance with regulation 13 shall additionally be tested against the concentrations specified in column (2) of Table 4B.";

(c) in regulation 21 (collection and analysis of samples)—

(i) in paragraph (2), the insertion, after "means", of "subject to paragraph (3)"; and

(ii) the addition, at the end, of the following—

"(3) In relation to each of the parameters and other substances listed in column (1) of Table 4B, paragraph (2)(d) shall have effect as if for sub-paragraph (iii) there were substituted the requirements of regulation 21A.";

(d) after regulation 21, the insertion of the following regulation—

"**Method of analysis of samples for particular parameters and substances**

**21A.**—(1) The method of analysis used for testing for a parameter or other substance listed in column (1) of Table 4B against the concentrations in column (2) of that Table must be capable, at the time of use—

(a) of measuring concentrations with the trueness and precision specified in relation to that parameter or substance in columns (3) and (4) of Table 4B; and

(b) of detecting the parameter or substance at the limit of detection specified in relation to it in column (5) of that Table.

(2) For the purposes of paragraph (1)—

"limit of detection" is to be calculated as—

(a) three times the relative within batch standard deviation of a natural sample containing a low concentration of the parameter or substance; or

(b) five times the relative within batch standard deviation of a blank sample;

"precision" (the random error) is the standard deviation (within a batch and between batches) of the spread of results about the mean; and

"trueness" (the systematic error) is the difference between the mean value of a large number of repeated measurements and the true value.";

(e) in regulation 29(1)(f), after the words "Part IV of these Regulations", the insertion of ", other than regulation 13B,"; and

(f) the insertion, after Table 4 in Schedule 3, of the following Tables—

"**TABLE 4A**

SAMPLING FOR PARTICULAR ORGANISMS AND SUBSTANCES

| (1) *Organism or substance* | (2) *Concentration or value and unit of measurement* | (3) *Volume of water supplied $m^3/d$* | (4) *Annual sampling frequency* | (5) *Estimated population of water supply zone* | (6) *Annual sampling frequency* |
|---|---|---|---|---|---|
| Benzene | 1.0 µg/l | | | | |
| Bromate | 10 µg$BrO_3$/l | | | | |
| *Clostridium perfringens** (including spores) | | <999 | S2 or R1 | <4,999 | S2 or R1 |
| | 0 | 1,000 –49,999 | S4 or R1 | 5,000–50,000 | S4 or R1 |
| | Number/100ml | > 50,000 | S8 or R2 | | |
| 1,2 dichloroethane | 3.0 µg/l | | | | |

* where the water originates from, or is influenced by, surface waters

| (1) *Organism or substance* | (2) *Concentration or value and unit of measurement* | (3) *Volume of water supplied $m^3/d$* | (4) *Annual sampling frequency* | (5) *Estimated population of water supply zone* | (6) *Annual sampling frequency* |
|---|---|---|---|---|---|
| Enterococci | 0 Number/100ml | | | | |
| Nitrite | 0.10 mg$NO_2$/ l | | | | |

* where the water originates from, or is influenced by, surface waters

**TABLE 4B**

PARAMETERS AND SUBSTANCES IN RELATION TO WHICH,SUBJECT TO REGULATION 21A, METHODS OF ANALYSISMUST SATISFY PRESCRIBED CHARACTERISTICS

| (1) *Parameter or other substance* | (2) *Concentration and unit of measurement* | (3) *Trueness % of concentration* | (4) *Precision % of concentration* | (5) *Limit of detection % of concentration* |
|---|---|---|---|---|
| Antimony | 5.0 µgSb/l | 25 | 25 | 25 |
| Arsenic | 10 µgAs/l | 10 | 10 | 10 |
| Benzene | 1.0 µg/l | 25 | 25 | 25 |
| Boron | 1.0 mgB/l | 10 | 10 | 10 |
| Bromate | 10 µg$BrO_3$/l | 25 | 25 | 25 |
| Copper | 2.0 µgCu/l | 10 | 10 | 10 |
| 1,2 dichloroethane | 3.0 µg/l | 25 | 25 | 10 |
| Lead | 25 µgPb/l | 10 | 10 | 10 |
| Nickel | 20 µgNi/l | 10 | 10 | 10 |
| Nitrite (ex works) | 0.1 mg$NO_2$/l | 10 | 10 | 10 |
| Tetrachloroethene* | 10 µg/l | 25 | 25 | 10 |
| Trichloroethene* | 10 µg/l | 25 | 25 | 10”. |

* Trueness, precision and limit of detection apply to the individual substances specified at 50% of the concentration in column (2).

SCHEDULE 6 regulation 41

PROGRAMMES OF WORK

A water undertaker’s programme of work shall—

(a) identify, by reference to the parameters set out in the Table below, those parameters in respect of which the requirements of regulation 41(1)(a) and (b) are unlikely to be satisfied unless steps are taken to secure that those requirements will be met;

(b) identify whether the requirement that the formula [nitrate]/50 + [nitrite]/3 < 1, where the square brackets signify the concentrations in mg/l for nitrate ($NO_3$) and nitrite ($NO_2$), is unlikely to be satisfied;

(c) specify the steps that the water undertaker intends to take for the purpose of securing that the requirements of regulation 41(1)(a) and (b) are met;

(d) specify the date by which each of the steps specified in accordance with paragraph (c) is proposed to be completed; and

(e) specify the times at which, or the periods within which, reports will be made to the Secretary of State in relation to the taking and completion of the steps specified in accordance with paragraph (c).

TABLE

Enterococci

Acrylamide

Antimony

Arsenic

Benzene

Benzo(a)pyrene

Boron

Bromate

Copper

1,2-dichloroethane

Epichlorohydrin

Lead

Nickel

Nitrite

Polycyclic aromatic hydrocarbons

Tetrachloroethene } sum of concentrations

Trichloroethene } sum of concentrations

Trihalomethanes—Total (sum of concentrations of chloroform, bromoform,dibromochloromethane and bromodichloromethane)

Vinyl chloride