

2016 No. 614

WATER, ENGLAND AND WALES

The Water Supply (Water Quality) Regulations 2016

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CONTENTS

PART 1

General

- | | | |
|----|--|---|
| 1. | Citation, commencement and application | 4 |
| 2. | Interpretation | 4 |

PART 2

Water supply zones

- | | | |
|----|--------------------|---|
| 3. | Water supply zones | 7 |
|----|--------------------|---|

PART 3

Wholesomeness

- | | | |
|----|---------------|---|
| 4. | Wholesomeness | 7 |
|----|---------------|---|

PART 4

Monitoring of water supplies

- | | | |
|-----|--|----|
| 5. | Interpretation and application of Part 4 | 8 |
| 6. | Monitoring: general provisions | 8 |
| 7. | Sampling points | 11 |
| 8. | Authorisation of supply points | 11 |
| 9. | Numbers of samples | 12 |
| 10. | Sampling: further provisions | 13 |

PART 5

Monitoring – additional provisions

- | | | |
|-----|---|----|
| 11. | Interpretation of Part 5 | 13 |
| 12. | Sampling for particular substances and parameters | 13 |

13.	Sampling at treatment works	13
14.	Sampling at service reservoirs	14
15.	Sampling: new sources	14
16.	Collection and analysis of samples	15

PART 6

Drinking water protected areas

17.	Drinking water abstraction points: monitoring sites	17
-----	---	----

PART 7

Investigations, authorisation of departures and remedial action

18.	Investigations: Schedule 1 parameters	18
19.	Investigations: indicator parameters	19
20.	Action by the Secretary of State	20
21.	Failure attributable to domestic distribution system where water is supplied to the public	21
22.	Authorisation of temporary supply of water that is not wholesome	22
23.	Authorisations: terms and conditions	24
24.	Publicity for authorisations	25
25.	Revocation and variation of authorisations	25

PART 8

Water treatment

26.	Disinfection and other treatment arrangements	26
27.	Risk assessment	27
28.	Procedure following risk assessment and prohibition of supply	27
29.	Water treatment to minimise contamination from pipes	28
30.	Replacement of lead pipes	28
31.	Application and introduction of substances and products	29
32.	Use of processes	31
33.	Offences	31

PART 9

Records and information

34.	Maintenance of records	32
35.	Provision of information	33

PART 10

Functions of local authorities in relation to water quality

36.	Application and interpretation of this Part	34
37.	Duties of local authorities: supplementary provision	34

PART 11

Enforcement

38.	Contraventions by relevant suppliers	35
-----	--------------------------------------	----

PART 12
Review

39.	Review	35
-----	--------	----

PART 13
Amendments and revocations

40.	Amendments and revocations	35
-----	----------------------------	----

SCHEDULE 1	— Prescribed concentrations and values	36
SCHEDULE 2	— Indicator parameters	38
SCHEDULE 3	— Monitoring	39
SCHEDULE 4	— Monitoring for indicative dose and analytical performance characteristics	42
SCHEDULE 5	— Analytical methodology	45
SCHEDULE 6	— Amendments	47
SCHEDULE 7	— Revocations	47

The Secretary of State makes these Regulations in exercise of the powers conferred by—

- (a) sections 67, 69, 77(3) and (4) and 213(2) of the Water Industry Act 1991(a), and
- (b) in relation to regulations 26, 31 and 33, section 2(2) of the European Communities Act 1972(b).

The Secretary of State has been designated for the purposes of section 2(2) of the European Communities Act 1972 in relation to the environment(c).

(a) 1991 c.56; the functions of the Secretary of State under section 67 were transferred to the National Assembly for Wales (“the Assembly”) (a) for the making of regulations concerning water supplied using the supply system of a water undertaker, in relation to the supply system of any water undertaker whose area is wholly or mainly in Wales, and (b) for the making of regulations concerning water supplied other than using the supply system of a water undertaker, in relation to Wales, by article 2 of, and Schedule 1 to, the National Assembly for Wales (Transfer of Functions) Order 1999 (S.I. 1999/672) (“the Order”); the functions of the Secretary of State under section 69 were, in relation to any water undertaker whose area is wholly or mainly in Wales and any licensed water supplier so far as relating to licensed activities using the supply system of any such water undertaker, transferred to the Assembly by the same provision of the Order; the functions of the Secretary of State under section 77 were transferred to the Assembly in relation to Wales by the same provision of the Order; the functions of the Secretary of State under section 213 were made exercisable by the Assembly to the same extent as the powers to which that section applies were made exercisable by the Assembly by virtue of the same provision of the Order; see the entry in Schedule 1 to the Order. By virtue of paragraph 30 of Schedule 11 to the Government of Wales Act 2006 (c.32), the functions transferred to and made exercisable by the Assembly are now exercisable by the Welsh Ministers. Section 69 was amended by paragraph 19 of Schedule 8, and Part 3 of Schedule 9, to the Water Act 2003 (c.37). It is prospectively amended by paragraph 68 of Schedule 7 to the Water Act 2014 (c.21) from a date to be appointed. Section 213(2) was amended by paragraph 28 of Schedule 1 to the Competition and Service (Utilities) Act 1992 (c.43) and by section 36(2) of, and paragraph 49(3) of Schedule 8 to, the Water Act 2003. It is prospectively amended by paragraph 119(4) of Schedule 7 to the Water Act 2014 from a date to be appointed.

(b) 1972 c.68; section 2(2) was amended by section 27(1)(a) of the Legislative and Regulatory Reform Act 2006 (c.51) and by Part 1 of the Schedule to the European Union (Amendment) Act 2008 (c.7).

(c) S.I. 2008/301.

PART 1

General

Citation, commencement and application

1.—(1) These Regulations may be cited as the Water Supply (Water Quality) Regulations 2016 and come into force on 27th June 2016 immediately after the commencement of the Private Water Supplies (England) Regulations 2016(a).

(2) Parts 1 to 9 and 11 of these Regulations apply in relation to the supply of water by every—

- (a) water undertaker(b) whose area is not wholly or mainly in Wales;
- (b) licensed water supplier(c) so far as relating to licensed activities not using the supply system of a water undertaker whose area is wholly or mainly in Wales.

(3) Part 10 of these Regulations applies to local authorities in England, as regards the discharge of functions under that Part, in relation to every—

- (a) water undertaker whose area is wholly in England;
- (b) water undertaker whose area is partly in England and partly in Wales, but only in respect of the part in England;
- (c) licensed water supplier so far as relating to licensed activities not using the supply system situated in Wales of any water undertaker.

Interpretation

2.—(1) In these Regulations—

“the 2000 Regulations” means the Water Supply (Water Quality) Regulations 2000(d);

“the Act” means the Water Industry Act 1991;

“appropriate local authority” in relation to—

- (a) a departure authorised under regulation 22,
- (b) an application for any such authorisation, or
- (c) an event specified in regulation 35(6),

means a local authority whose area contains any part of the water supply zone to which the authorisation relates or, in the case of an application, would relate if a departure were authorised in the terms sought, or whose area is affected or is likely to be affected by the event;

“audit monitoring” has the meaning given in regulation 5(1);

“blending point” means a point at which water originating from two or more sources and treated for the purposes of their supply for regulation 4(1) purposes is combined under conditions that are designed to secure that, after such combination, the requirements of regulation 4(2) are met;

“Chapter 3” means Chapter 3 of Part 3 of the Act (quality and sufficiency of water supplies);

“check monitoring” has the meaning given in regulation 5(2);

“combined licensee” means a company which is the holder of a combined licence within the meaning of Chapter 1A of Part 2 of the Act (water supply licences and sewerage licences)(e);

(a) S.I. 2016/573.

(b) See section 6 of the Act for the meaning of “water undertaker”.

(c) See sections 17A and 219(1) of the Act for the meaning of “licensed water supplier”. This definition is prospectively repealed by paragraph 120 of Schedule 7 to the Water Act 2014 from a date to be appointed.

(d) S.I. 2000/3184, as amended by S.I. 2001/2885, 2002/2469, 2005/2035, 2007/2734, 2010/991, 2013/235, 1387.

(e) Chapter 1A was inserted by paragraph 2 of Schedule 4 to the Water Act 2003.

“consumer” means a person to whom water is supplied for regulation 4(1) purposes by a relevant supplier in the discharge of its duties under Chapter 3;

“disinfection” means a process of water treatment to remove or render harmless to human health every pathogenic micro-organism and pathogenic parasite that would otherwise be present in the water;

“groundwater” means water contained in underground strata, and section 221(3) of the Water Resources Act 1991(a) has effect for the purposes of this definition as it has effect for the purpose of construing references in that Act to water contained in underground strata;

“indicative dose” (ID) means the committed effective dose for 1 year of ingestion resulting from all the radionuclides whose presence has been detected in a supply of water intended for human consumption, of natural and artificial origin, excluding tritium, potassium-40, radon and short-lived radon decay products;

“indicator parameter” means a parameter listed in Schedule 2;

“local authority” means any of the following—

- (a) the Common Council of the City of London;
- (b) a London Borough Council;
- (c) a district council;
- (d) the council of a county in which there are no district councils;

“National Public Health Service for Wales” means an NHS trust within the meaning of the National Health Service (Wales) Act 2006(b) if and insofar as it has the function of providing services in relation to public health in Wales;

“NTU” means Nephelometric Turbidity Unit;

“parameter” means a property, element, organism or substance listed in column 2 of Table A or of Table B in Schedule 1, or in Schedule 2, as read, where appropriate, with the notes to those Tables and to Schedule 2;

“pesticides and related products” means any of the following, and includes their relevant metabolites, degradation and reaction products—

- (a) organic insecticide;
- (b) organic herbicide;
- (c) organic fungicide;
- (d) organic nematocide;
- (e) organic acaricide;
- (f) organic algicide;
- (g) organic rodenticide;
- (h) organic slimicide;
- (i) any product related to any of (a) to (h) (including any growth regulator);

“prescribed concentration or value”, in relation to any parameter, means the maximum or minimum concentration or value specified in relation to that parameter in Table A or in Table B in Schedule 1, as measured by reference to the unit of measurement so specified and as read where appropriate with the notes to those Tables;

“Public Health England” means the executive agency of that name of the Department of Health;

“radioactive parameters” means the following indicator parameters listed in Schedule 2—

- (a) indicative dose (item 8);
- (b) radon (item 9);

(a) 1991 c.57.
(b) 2006 c.42.

(c) tritium (item 12);

“regulation 4(1) purposes”, in relation to a supply of water, means a supply to premises—

(a) for such domestic purposes as consist in or include, cooking, drinking, food preparation or washing, or

(b) for food production purposes(a);

“relevant supplier” means a water undertaker or licensed water supplier;

“retail licensee” means a company which is the holder of a retail licence within the meaning of Chapter 1A of Part 2 of the Act;

“sampling point”—

(a) in relation to water supplied from a distribution network, means a point, being a consumer’s tap, that is selected for the purposes of Part 4 of these Regulations;

(b) in relation to water supplied from a tanker, means the point at which the water emerges from the tanker;

“specification” in relation to an indicator parameter, means the concentration, value or state shown as applicable to that parameter in Schedule 2, as measured by reference to the unit of measurement so shown;

“state”, in relation to an indicator parameter, means the state specified in relation to that parameter in Schedule 2, as measured by reference to the unit of measurement so specified;

“supply point” means a blending point, service reservoir, treatment works or other point, not being a sampling point, which the Secretary of State authorises under regulation 8, for the purposes of regulation 6;

“supply system” is to be construed in accordance with section 17B(4A) of the Act(b);

“water of a relevant description” means water supplied by a relevant supplier which uses a supply system for the purposes of supplying water to consumers, being a supply system into which the water undertaker or combined licensee introduces water;

“water supply zone” in relation to a water undertaker and a licensed water supplier and a year, means an area designated for that year by the water undertaker in accordance with regulation 3;

“year” means a calendar year.

(2) In these Regulations a reference to an application or notice includes a reference to that application or notice in electronic form.

(3) Subject to paragraph (4), references in these Regulations to a service reservoir are references to any structure, other than a structure at a treatment works, in which a reserve of water that has been treated with a view to complying with the requirements of regulation 4 is contained and stored for the purpose of meeting a variable demand for the supply of water.

(4) Where references in these Regulations to a service reservoir would, but for this paragraph, include references to a structure comprising more than one compartment—

(a) each compartment which has its own water inlet and water outlet and is not connected hydraulically to any other compartment is to be treated as a single service reservoir,

(b) the compartments that are connected hydraulically are to be treated as a single service reservoir, and

(c) unless all of the compartments are connected hydraulically, the structure as a whole is not to be treated as a service reservoir.

(a) See section 93(1) of the Act for the meaning of “food production purposes”.

(b) Section 17B was inserted by paragraph 2 of Schedule 4 to the Water Act 2003. It is prospectively amended by section 2 of, and paragraph 6 of Schedule 5 and paragraph 10 of Schedule 7 to, the Water Act 2014 from a date to be appointed.

PART 2

Water supply zones

Water supply zones

3.—(1) Before the beginning of each year in which it intends to supply water, a water undertaker must designate the name and areas within its area of supply that are to be its water supply zones for that year.

(2) A water supply zone may not comprise an area whose population immediately before the beginning of the year in question is estimated by the water undertaker to exceed 100,000.

(3) The water quality within a water supply zone must be approximately uniform.

(4) A water undertaker may not vary a designation under paragraph (1) after the beginning of the year in relation to which the designation has effect.

PART 3

Wholesomeness

Wholesomeness

4.—(1) Water supplied to premises—

- (a) for such domestic purposes as consist in or include, cooking, drinking, food preparation or washing, or
- (b) for food production purposes,

is, subject to paragraphs (4) and (5), to be regarded as wholesome for the purposes of Chapter 3, as it applies to the supply of water for those purposes, if the requirements of paragraph (2) are satisfied.

(2) The requirements of this paragraph are—

- (a) that the water does not contain—
 - (i) any micro-organism (other than a parameter listed in Schedule 1) or parasite, or
 - (ii) any substance (other than a parameter listed in Schedule 1),at a concentration or value which would constitute a potential danger to human health;
- (b) that the water does not contain any substance (whether or not a parameter) at a concentration or value which, in conjunction with any other substance it contains (whether or not a parameter) would constitute a potential danger to human health;
- (c) that the water does not contain concentrations or values of the parameters listed in Tables A and B in Schedule 1 in excess of or, as the case may be, less than, the prescribed concentrations or values;
- (d) that the water satisfies the formula “[nitrate]/50 + [nitrite]/3 ≤ 1”, where the square brackets signify the concentrations in mg/l for nitrate (NO₃) and nitrite (NO₂).

(3) The point at which the requirements of paragraph (2), insofar as they relate to the parameters set out in Part I of Table A and in Table B in Schedule 1, are to be complied with is—

- (a) in the case of water supplied from a tanker, the point at which the water emerges from the tanker;
- (b) in the case of water supplied in bottles or containers, the point at which the water first emerges from any bottle or container collected from a local distribution point;
- (c) in the case of water used in a food production undertaking, the point at which it is used in the undertaking;
- (d) in any other case, the consumer’s tap.

(4) Water supplied for regulation 4(1) purposes must not be regarded as wholesome for the purposes of Chapter 3 if, on transfer from a treatment works for supply for those purposes—

- (a) it contains a concentration of the coliform bacteria or *E. coli* parameter (items 1 and 2 in Part II of Table A in Schedule 1) in excess of the prescribed concentrations,
- (b) it contains a concentration of nitrite in excess of 0.1mgNO₂/l.

(5) Subject to paragraph (6), water supplied for regulation 4(1) purposes is not to be regarded as wholesome for the purposes of Chapter 3 if, on transfer from a service reservoir for supply for those purposes, it contains a concentration of the coliform bacteria or *E. coli* parameter in excess of the prescribed concentrations.

(6) Water transferred from a service reservoir for supply for regulation 4(1) purposes is to be regarded as unwholesome if more than 5% of samples taken in a year exceed the prescribed concentration for the coliform bacteria parameter.

PART 4

Monitoring of water supplies

Interpretation and application of Part 4

5.—(1) In this Part, “audit monitoring” means monitoring for the purpose of obtaining information from which it may be established—

- (a) as regards the parameters listed in Tables A and B in Schedule 1, whether water supplied for regulation 4(1) purposes satisfies the provisions of Part 3 or, if a departure has been authorised under Part 7 in relation to that supply, those provisions as read with the terms of that departure;
- (b) as regards indicator parameters, whether water supplied for regulation 4(1) purposes meets the specifications for those parameters.

(2) In this Part, “check monitoring” means monitoring for the purpose of obtaining information at regular intervals—

- (a) as to the organoleptic and microbiological quality of water, and
- (b) where relevant, as to the effectiveness of drinking water treatment (particularly of disinfection) for the purposes referred to in paragraph (3).

(3) The purpose of check monitoring is to determine—

- (i) as regards the parameters listed in Tables A and B in Schedule 1, whether water supplied for regulation 4(1) purposes satisfies the provisions of Part 3 or, if a departure has been authorised under Part 7 in relation to that supply, those provisions as read with the terms of that departure;
- (ii) as regards indicator parameters, whether water supplied for regulation 4(1) purposes meets the specifications for those parameters.

(4) This Part applies to water supplied for regulation 4(1) purposes by a relevant supplier in the performance of its duties under Chapter 3.

(5) Regulations 6 to 10 apply to a combined licensee in relation to samples taken from supply points as they apply to a water undertaker, but only insofar as the combined licensee is introducing water into a water supply zone in which the water undertaker takes samples under this Part (to the extent authorised by or under regulation 8) from supply points.

Monitoring: general provisions

6.—(1) Paragraph (2) applies for the purpose of determining whether water to which this Part applies satisfies the provisions of Part 3 or, if a departure has been authorised under Part 7 in relation to that supply, those provisions as read with the terms of that authorisation.

(2) A water undertaker must take or cause to be taken, and analyse or cause to be analysed, not less than the number of samples of the water within each of the water supply zones which it supplies specified in, or in accordance with the provisions of, this Part and Schedule 3.

(3) Except in a case to which paragraph (15) applies, the parameters listed in Tables A and B in Schedule 1 and the indicator parameters must be subject—

- (a) as regards a parameter listed in column 2 of Table 1 in Schedule 3 and in relation to which there is no entry in column 3 of that Table, to check monitoring;
- (b) as regards a parameter so listed in relation to which there is an entry in column 3 of that Table, to check monitoring in the circumstances specified in that column;
- (c) in any other case, to audit monitoring.

(4) In the application of paragraph (3)(b) to the aluminium, *Clostridium perfringens*, iron and manganese parameters (items 1, 3, 10 and 11 in Table 1 in Schedule 3), a supply which consists of both groundwater and surface water is deemed to be a supply which consists only of surface water.

(5) The copper, lead and nickel parameters (items 10, 15 and 17 in Table B in Schedule 1) must be monitored in such a manner as the Secretary of State determines from time to time and specifies by notice in writing given to each water undertaker.

(6) Paragraphs (7) to (15) apply to the radioactive parameters.

(7) As regards the indicative dose parameter—

- (a) monitoring must be carried out where an artificial source of radionuclides or elevated natural radioactivity is present and it cannot be shown on the basis of other representative monitoring programmes or other investigations that the level of indicative dose is below the value specified in Schedule 2;
- (b) where monitoring for natural radionuclide levels is required, the Secretary of State must define the frequency of the monitoring of either gross alpha activity, gross beta activity or individual natural radionuclides, depending on the screening strategy adopted in accordance with Schedule 4;
- (c) where the monitoring frequency defined in accordance with sub-paragraph (b) requires one sample per year for naturally occurring radioactivity, a further sample must be taken where any change occurs in relation to the supply that is likely to influence the concentrations of radionuclides in water supplied for regulation 4(1) purposes;
- (d) in the case of naturally occurring radionuclides where the results of the monitoring referred to in sub-paragraph (b) show that the concentration of radionuclides in the supply is stable, the minimum sampling and analysis frequencies are to be decided by the Secretary of State and confirmed by notice to the water undertaker, taking into account the risk to human health;
- (e) a water undertaker may use a screening strategy for gross alpha, gross beta activity or individual radionuclides and, in the event that there is any exceedance of the value specified in Schedule 2, it must carry out an analysis of the specific radionuclides in accordance with Schedule 4.

(8) As regards the radon parameter—

- (a) a water undertaker must ensure that a representative survey is carried out in accordance with paragraph (9) to determine the likelihood of a supply failing the parametric value for radon specified in Schedule 2;
- (b) monitoring must be carried out where there is reason to believe, on the basis of the results of the representative surveys or other reliable information, that the parametric value for radon might be exceeded.

(9) A representative survey must be designed in such a way—

- (i) as to be capable of determining the scale and nature of likely exposures to radon in water intended for human consumption originating from different types of groundwater sources and wells in different geological areas;

- (ii) that the underlying parameters, in particular the geology and hydrology of the area, radioactivity of rock or soil, and well type, can be identified and used to direct further action to areas of likely high exposure.

(10) As regards the tritium parameter—

- (a) monitoring must be carried out where an anthropogenic source of tritium or other artificial radionuclides is present within the catchment area and it cannot be shown on the basis of other surveillance programmes or investigations that the level of tritium is below the parametric value specified in Schedule 2;
- (b) if the concentration of tritium exceeds its parametric value, an investigation of the presence of other artificial radionuclides must be carried out.

(11) Where a parametric value is exceeded in a particular sample, the Secretary of State must define the extent of re-sampling necessary to ensure that the measured values are representative of an average activity concentration for a full year.

(12) The Secretary of State may notify a water undertaker which supplies water to a water supply zone that a radioactive parameter need not be monitored if the Secretary of State is satisfied that, for the period specified in the notice, the water supplied to that zone for regulation 4(1) purposes—

- (a) gives rise to a calculated indicative dose that is below the parametric value specified in Schedule 2,
- (b) contains levels of radon that are below the parametric value specified in Schedule 2,
- (c) contains levels of tritium that are below the parametric value specified in Schedule 2.

(13) Where paragraph (12) applies, the Secretary of State must communicate the grounds for the notification to the European Commission with the necessary documentation supporting the decision (including the findings of any surveys, monitoring or investigations carried out).

(14) The Secretary of State must by notice in writing withdraw a notice under paragraph (12)—

- (a) given in relation to the indicative dose parameter, if the Secretary of State believes that water supplied to the zone in question for regulation 4(1) purposes gives rise to a calculated indicative dose that is likely to exceed the parametric value specified in Schedule 2;
- (b) given in relation to the radon parameter, if the Secretary of State believes that water supplied to the zone in question for regulation 4(1) purposes contains levels of radon that are likely to exceed the parametric value specified in Schedule 2;
- (c) given in relation to the tritium parameter, if the Secretary of State believes that water supplied to the zone in question for regulation 4(1) purposes contains levels of tritium that are likely to exceed the parametric value specified in Schedule 2.

(15) A water undertaker which receives a notice under paragraph (14) must monitor or cause to be monitored the indicative dose parameter or, as the case may be, the radon or tritium parameter, in accordance with Tables 2 and 3 in Schedule 3.

(16) Where the distribution of water in any part of a water supply zone is by tanker and is (or is likely to be) an intermittent short-term supply, samples of water from each tanker from which the water is distributed must be taken—

- (a) 48 hours after the commencement of the distribution from that tanker, and
- (b) every 48 hours thereafter until the distribution is discontinued.

(17) The first sample taken in relation to each distribution must be analysed for compliance with the following parameters—

- (a) *E. coli* (item 2 in Part II of Table A in Schedule 1), and
- (b) conductivity (item 6 in Schedule 2).

(18) The second and any subsequent samples must be analysed for compliance with those and every other parameter.

(19) On the coming into force of these Regulations, a notification under regulation 6(7) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notification under paragraph (12) of this regulation.

Sampling points

7. Except in relation to water supplied from a tanker, sampling points in respect of every parameter, other than a parameter for which samples are taken from a supply point authorised by or under regulation 8, must be selected at random unless, by notice in writing to a water undertaker (whether or not on the application of the undertaker), the Secretary of State otherwise determines.

Authorisation of supply points

8.—(1) For those parameters specified as items 7 to 16 and 19 to 28 in column 1 of Table 3 in Schedule 3, samples may be taken from—

- (a) any blending point;
- (b) the water leaving any service reservoir which receives water from a treatment works before its supply to any consumer;
- (c) the water leaving any treatment works.

(2) If the Secretary of State is satisfied that analysis of those samples will produce data which are unlikely to differ in any material respect from the data that would be produced from analysis within the sampling points, the Secretary of State may authorise the use for the purposes of regulation 6 of those samples taken for a water supply zone from a blending point, a service reservoir of that description or a treatment works.

(3) In respect of any water supply zone, the taking of samples from a supply point is not authorised under paragraph (2) where a combined licensee introduces water into the water supply zone, unless the water quality within the water supply zone remains approximately uniform.

(4) Subject to paragraph (6), the Secretary of State may, in relation to any parameter not covered by an authorisation given under paragraph (2), on the written application of a water undertaker or on the joint written application of a water undertaker and combined licensee, authorise the use for the purposes of regulation 6 of samples taken for a water supply zone otherwise than from a sampling point.

(5) An authorisation under paragraph (4) may extend to all samples in relation to that parameter or to such number or proportion of those samples as is specified in the authorisation.

(6) The Secretary of State must not grant an authorisation under paragraph (4) unless the Secretary of State is satisfied that analysis of samples taken from a point other than a sampling point will produce data in respect of the parameter in question which are unlikely to differ in any material respect from the data that would be produced in respect of that parameter from analysis of samples obtained from sampling points.

(7) The Secretary of State may at any time vary or revoke an authorisation under paragraph (2) or (4).

(8) But, unless it appears to the Secretary of State that the immediate modification or revocation of an authorisation under paragraph (4) is required in the interests of public health, the Secretary of State must give the water undertaker to which the authorisation relates at least 6 weeks' notice of the Secretary of State's intention to modify or revoke before making such modification or revocation.

(9) A water undertaker must notify the Secretary of State as soon as it has reasonable grounds for believing that an analysis of samples taken for a water supply zone from a point other than a sampling point would produce data in respect of the parameter in question which would differ in a material respect from the data produced by an analysis of samples taken from any of the sampling points within that zone.

(10) On being notified under paragraph (9) and without the need for prior notice to the water undertaker, the Secretary of State must revoke the authorisation under paragraph (4).

(11) On the coming into force of these Regulations—

- (a) an authorisation under regulation 8(1) of the 2000 Regulations is taken to be an authorisation given under paragraph 8(2) of this regulation;
- (b) an authorisation under regulation 8(2) of the 2000 Regulation which had effect immediately before the coming into force of these Regulation is taken to be an authorisation under paragraph 8(4) of this regulation.

Numbers of samples

9.—(1) Subject to paragraph (2), in each year a water undertaker must take or cause to be taken from its sampling points or, to the extent authorised by or under regulation 8, from its supply points, the standard number of samples for analysis as regards residual disinfectant and each parameter listed in—

- (a) column 1 of Table 2 in Schedule 3;
- (b) column 2 of Table 3 in Schedule 3.

(2) In respect of a parameter subject to check monitoring and where paragraph (3) applies, the number of samples to be taken in the following year for that parameter may be the reduced number.

(3) This paragraph applies where—

- (a) a water undertaker is of the opinion that the quality of water supplied to a water supply zone which it supplies is unlikely to deteriorate, and
- (b) in each of the two preceding years the results of the samples taken in accordance with these Regulations or the 2000 Regulations show no significant variation and—
 - (i) if the parameter is colony counts, they have shown no abnormal change;
 - (ii) if the parameter is hydrogen ion (item 9 in Table 1 of Schedule 3), the water undertaker has established a pH value that is not less than 6.5 and not more than 9.5;
 - (iii) in any other case, the water undertaker has established a concentration or value for that parameter that is significantly lower than the prescribed concentration or value, or specification.

(4) Samples required to be taken by this regulation must be taken at regular intervals.

(5) In this regulation—

- (a) in relation to sampling points, residual disinfectant or a parameter and the supply of water within one of the ranges shown in column 2 of Table 2 in Schedule 3, “the standard number” and the “reduced number” mean the numbers shown in column 4 and column 3 respectively of that Table, as applicable to that substance or parameter by reference to a population within that range;
- (b) in relation to supply points, each of the parameters specified as items 7, 8 and 9 to 28 in column 1 of Table 3 in Schedule 3, and the supply of a volume of water within one of the ranges shown in column 3 of that Table, “the standard number” and “the reduced number” mean, subject to sub-paragraph (c), the numbers shown in column 5 and column 4 respectively of that Table, as applicable to that parameter by reference to a volume supplied within that range;
- (c) where a particular supply point is in use for only part of a year, “the standard number” and “the reduced number” mean the numbers that bear to the numbers shown in columns 5 and 4 respectively of Table 3 of Schedule 3, in the same proportion as the number of days in that year in which the supply point has been in use bears to 365.

Sampling: further provisions

10.—(1) Paragraph (2) applies as soon as a relevant supplier has reasonable grounds for believing that any element, organism or substance, other than a residual disinfectant or a parameter (whether alone or in combination with any parameter or any other element, organism or substance) may cause the supply within any of the water supply zones which it supplies to be a supply which does not satisfy—

- (a) the provisions of Part 3, or
- (b) if a departure has been authorised under Part 7, those provisions as read with the terms of that authorisation.

(2) Where this paragraph applies, the relevant supplier must take or cause to be taken sufficient samples from water within that zone (whether from a service reservoir, a treatment works or otherwise) in respect of any element, organism or substances, in order to establish whether that water is wholesome.

PART 5

Monitoring – additional provisions

Interpretation of Part 5

11.—(1) In this Part, in relation to residual disinfectant or a parameter specified as item 1, 2, 3, 4 or 6 in column 1 of Table 3 in Schedule 3, and the supply of a volume of water within one of the ranges shown in column 3 of that Table—

- (a) “the standard number” means the applicable number shown in column 5 of that Table; and
- (b) “the reduced number” means the applicable number shown in column 4 of that Table.

Sampling for particular substances and parameters

12.—(1) For the purposes of establishing the quality of water to be supplied to any of its water supply zones, a water undertaker must take or cause to be taken, and analyse or cause to be analysed, not less than the number of samples specified in this Part.

(2) For the purposes of establishing the quality of water to be supplied in any supply system into which a combined licensee introduces water, the combined licensee must take or cause to be taken, and analyse or cause to be analysed, not less than the number of samples specified in this Part.

Sampling at treatment works

13.—(1) Subject to paragraphs (2), (4) and (6), in each year every water undertaker or combined licensee must take or cause to be taken, from the point at which water leaves each treatment works which it uses to supply water to water supply zones, the standard number of samples for analysis—

- (a) for determining the concentration of residual disinfectant,
- (b) for determining whether, in relation to the colony counts and turbidity parameters (items 5 and 13 in Schedule 2), water leaving treatment works meets the specifications for those parameters set out in Schedule 2, and
- (c) for testing for compliance with the prescribed concentrations or values in respect of the coliform bacteria, *E. coli*, and nitrite parameters (in Part II of Table A in Schedule 1 and item 19 in Table B of Schedule 1 respectively) for leaving water treatment works.

(2) Paragraph (3) applies where in each of the two preceding years the results of the analysis of the samples taken, subject to paragraph (4), have established that—

- (a) in respect of coliform bacteria, *E. coli* or nitrite parameters, the maximum concentration has not been exceeded;
- (b) in respect of the turbidity parameter, the specified value of 1 NTU has been met;
- (c) in respect of the colony counts parameter, there has been no significant increase.

(3) The number of samples taken in respect of the particular parameter in the following year from the point at which water leaves that treatment works may be the reduced number.

(4) In respect of the coliform bacteria and the *E. coli* parameters (items 1 and 2 in Part II of Table A in Schedule 1), the reduced number of samples may only be taken in accordance with paragraph (3) if the water undertaker or combined licensee is of the opinion that—

- (a) there is no foreseeable risk that the supply will exceed the maximum concentration for that parameter, and
- (b) the treatment works is designed to secure that, in the event of a failure of the disinfection process, water that has not been disinfected cannot enter the supply.

(5) Samples required to be taken by this regulation must be taken at regular intervals.

(6) Where a particular treatment works is in use for part only of a year, the minimum number of samples to be taken from that works in that year must bear to the standard number or, as the case may be, the reduced number, the same proportion as the number of days in that year in which the treatment works has been in use bears to 365.

Sampling at service reservoirs

14. Every water undertaker or combined licensee must take or cause to be taken, from each of its service reservoirs in each week in which the reservoir is in use, one sample for analysis—

- (a) for testing for compliance with the prescribed concentrations or values in respect of the coliform bacteria and *E. coli* parameters,
- (b) for determining the concentration of the residual disinfectant, and
- (c) for determining whether the specification in relation to the colony counts parameter is met.

Sampling: new sources

15.—(1) This regulation applies in relation to—

- (a) any source which has not previously been used for the supply of water by a water undertaker or combined licensee;
- (b) any source which has been so used but not so used for a period of 6 months preceding the date on which the water undertaker or combined licensee proposes to supply water from it.

(2) Every water undertaker or combined licensee must take or cause to be taken, in accordance with paragraphs (3) and (4), such samples of water as enable it to establish—

- (a) whether water can be supplied from that source without contravening section 68(1) of the Act(a), and
- (b) the treatment necessary to ensure that section 68(1) of the Act is complied with in relation to the supply of that water.

(3) The samples must be taken or be caused to be taken—

- (a) before the water undertaker or combined licensee supplies water from a source mentioned in paragraph (1)(a);

(a) Section 68(1) was amended by paragraph 18 of Schedule 8 to the Water Act 2003 (c.37). It is prospectively amended by paragraph 38 of Schedule 5, and paragraphs 66 and 67 of Schedule 7, to the Water Act 2014 (c.21).

- (b) as soon as reasonably practicable after it has begun to supply water from a source mentioned in paragraph (1)(b).

(4) Samples must be taken—

- (a) in the case of a source mentioned in paragraph (1)(a), in respect of—
 - (i) the parameters listed in Schedules 1 and 2; and
 - (ii) any other element, organism or substance which, in the opinion of the water undertaker or combined licensee proposing to use the source, may cause the supply to contravene section 68(1) of the Act;
- (b) in the case of a source mentioned in paragraph (1)(b), in respect of—
 - (i) the parameters listed in Table A in Schedule 1;
 - (ii) the conductivity, hydrogen ion and turbidity parameters; and
 - (iii) any other parameter as regards which the water undertaker or combined licensee proposing to use the source is of the opinion that its concentration or value is likely to have altered since the last occasion on which water from that source was analysed.

(5) Unless the conditions in paragraph (6) are satisfied, a water undertaker or combined licensee must not supply water from a source mentioned in paragraph (1)(a) for regulation 4(1) purposes until 1 month has passed following the day on which the water undertaker or combined licensee has complied with regulation 28(1) with respect to the source.

(6) The conditions are that the water undertaker or combined licensee—

- (a) must supply water from the source as a matter of urgency in order to prevent an unexpected interruption in piped supply to consumers, and
- (b) before the supply is made, has carried out a risk assessment under regulation 27 specifically with respect to that source.

(7) For the purposes of paragraph (6)(b), regulation 27 applies to supplies made as a matter of urgency as if “treatment works” includes a source from which untreated water is supplied.

Collection and analysis of samples

16.—(1) Every water undertaker or combined licensee must secure, so far as reasonably practicable, that in taking, handling, transporting, storing and analysing any sample required to be taken for the purposes of Part 4 or this Part, or causing any such sample to be taken, handled, transported, stored and analysed, the appropriate requirements are satisfied.

(2) In this regulation, “the appropriate requirements” means such of the following requirements as are applicable—

- (a) the sample is representative of the quality of the water at the time of sampling;
- (b) the sample is not contaminated when being taken;
- (c) the sample is kept at such a temperature and in such conditions as secure that there is no material alteration of the concentration or value for the measurement or observation of which the sample is intended;
- (d) the sample is analysed as soon as reasonably practicable after it has been taken—
 - (i) by or under the supervision of a person who is competent to perform that task, and
 - (ii) with the use of such equipment as is suitable for the purpose;
- (e) any laboratory at which samples are analysed has a system of analytical quality control that is subjected from time to time to checking by a person who is—
 - (i) not under the control of the laboratory, the water undertaker or the combined licensee, and
 - (ii) approved by the Secretary of State for that purpose.

(3) In paragraph (2)(e), “laboratory at which samples are analysed” includes a person who undertakes the analysis of samples for the purposes of Part 4 or this Part, whether at the time and place at which the samples are taken or otherwise.

(4) Every water undertaker or combined licensee must maintain such records as are sufficient to enable it to establish, in relation to each sample taken for the purposes of Part 4 or this Part, that such of the appropriate requirements as are applicable to that sample have been satisfied.

(5) Subject to paragraph (7), for the purpose of establishing, within acceptable limits of deviation and detection, whether the sample contains concentrations or values which contravene the prescribed concentrations or values, or exceed the specifications for indicator parameters—

- (a) the method of analysis specified in column 2 of Table A1 in Schedule 5 must be used for the parameter specified in relation to that method in column 1;
- (b) the method of analysis used for a parameter specified in column 1 of Table A2 in that Schedule must be capable at the time of use—
 - (i) of measuring concentrations and values equal to the parametric value with the trueness and precision specified in relation to that parameter in columns 2 and 3 of that Table, and
 - (ii) of detecting the parameter at the limit of detection specified in relation to that parameter in column 4 of that Table;
- (c) the method of analysis used for determining compliance with the hydrogen ion parameter (item 7 in Schedule 2) must be capable, at the time of use, of measuring concentrations equal to the parametric value with a trueness of 0.2 pH unit and a precision of 0.2 pH unit; and
- (d) the method of analysis used for the odour and taste parameters (items 5 and 7 in Part II of Table B in Schedule 1) must be capable, at the time of use, of measuring values equal to the parametric value with a precision of 1 dilution number at 25°C.

(6) For the purposes of paragraph (5)—

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

“precision” (the random error) is to be calculated as twice the standard deviation (within a batch and between batches) of the spread of results about the mean;

“trueness” (the systematic error) is to be calculated as the difference between the mean value of the large number of repeated measurements and the true value.

(7) The Secretary of State may, on the application of any person, authorise a method of analysis other than that specified in paragraph 5(a) (“the prescribed method”).

(8) An application for the purposes of paragraph (7) must be made in writing and must be accompanied by—

- (a) a description of the method of analysis, and
- (b) the results of the tests carried out to demonstrate the reliability of that method and its equivalence to the prescribed method.

(9) But the Secretary of State must not authorise the use of the method proposed in the application unless the Secretary of State is satisfied that the results obtained by the use of that method are at least as reliable as those produced by the use of the prescribed method.

(10) An authorisation under paragraph (7) may be subject to such conditions as the Secretary of State thinks fit.

(11) The Secretary of State may at any time, by notice in writing served on the water undertaker or combined licensee to which an authorisation under paragraph (7) has been given, revoke the authorisation, but any such notice must be served no later than 3 months before the date on which the revocation is stated to take effect.

(12) On the coming into force of these Regulations, an authorisation given under regulation 16(7) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be an authorisation under paragraph (7) of this regulation.

PART 6

Drinking water protected areas

Drinking water abstraction points: monitoring sites

17.—(1) Every water undertaker or combined licensee must identify every point from which it abstracts water for supply for regulation 4(1) purposes.

(2) At every abstraction point, the relevant water undertaker or combined licensee must take or cause to be taken such samples, and analyse or cause to be analysed those samples for such properties, organisms and substances as it considers necessary in order to comply with regulations 26 to 28.

(3) In relation to any abstraction point, the Secretary of State may, by notice served on the relevant water undertaker or combined licensee, require the relevant water undertaker or combined licensee—

- (a) to take or cause to be taken such numbers of samples of water per year as may be specified, and
- (b) to analyse or cause to be analysed those samples for such concentrations or values of such properties, organisms and substances as may be specified and at such frequencies as may be specified.

(4) The Secretary of State may, by notice served on the relevant undertaker or combined licensee, revoke or vary a notice served under paragraph (3).

(5) Every analysis required under—

- (a) paragraph (2), in relation to every body of surface water which provides more than 100 cubic metres of water per day as an average, must be carried out at no less than the following frequencies—
 - (i) 4 per year, where the population so served by the body of surface water is less than 10,000 people;
 - (ii) 8 per year, where the population so served is from 10,000 to 30,000 people;
 - (iii) 12 per year, where the population so served is greater than 30,000 people;
- (b) paragraphs (2) and (3) must be in accordance with such relevant standards as may be specified by the Secretary of State by notice served on the water undertaker or combined licensee.

(6) For the purposes of—

- (a) paragraphs (2) and (3) and this paragraph—
 - “abstraction point” means an abstraction point identified under paragraph (1);
 - “relevant water undertaker or combined licensee” means the water undertaker or combined licensee which identifies the abstraction point;
- (b) paragraph (3), “specified” means specified in the notice served under that paragraph;
- (c) paragraph (5), “body of surface water” has the meaning given in Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy(a).

(a) O.J. No L 327, 22.12.2000, p 1, as last amended by Commission Directive 2014/101/EU (OJ No L 311, 31.10.2014, p 32).

(7) A notice given under regulation 16A(3) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (3) of this regulation.

(8) A notice given under regulation 16A(5)(b) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (5)(b) of this regulation.

PART 7

Investigations, authorisation of departures and remedial action

Investigations: Schedule 1 parameters

18.—(1) A water undertaker or combined licensee must immediately take such steps as are necessary to identify the matters specified in paragraph (2) where it has reason to believe that water of a relevant description—

- (a) fails or is likely to fail to satisfy a requirement of regulation 4(2),
- (b) is to be regarded as unwholesome by virtue of regulation 4(4), or
- (c) if regulation 4(6) were ignored, would be regarded as unwholesome by virtue of regulation 4(5).

(2) The matters referred to in paragraph (1) are—

- (a) the cause and extent of the failure or, as the case may be, the apprehended failure;
- (b) the Schedule 1 parameters in respect of which the prescribed concentration or value has not been or is unlikely to be achieved;
- (c) in relation to each parameter so identified, whether the failure or apprehended failure to achieve the prescribed concentration or value is attributable—
 - (i) to the domestic distribution system,
 - (ii) to the maintenance of that system, or
 - (iii) to neither of those matters.

(3) Where a departure has been authorised under this Part—

- (a) paragraph (1) is to apply only in respect of the Schedule 1 parameters (if any) that are not specified in the authorisation;
- (b) every water undertaker or combined licensee which has reason to believe that water of a relevant description fails or is likely to fail to satisfy the concentration or value required by the authorisation in relation to any Schedule 1 parameter must immediately take such steps as are necessary to identify the matters specified in paragraph (4).

(4) The matters referred to in paragraph (3) are—

- (a) the cause and extent of the failure or, as the case may be, the apprehended failure;
- (b) the Schedule 1 parameters in respect of which the required concentration or value has not been or is unlikely to be achieved;
- (c) in relation to each parameter so identified, whether the failure or apprehended failure to achieve that concentration or value is attributable—
 - (i) to the domestic distribution system,
 - (ii) to the maintenance of that system, or
 - (iii) to neither of those matters.

(5) As soon as possible after the matters specified in paragraph (2) or (4) have been identified, the water undertaker or combined licensee must—

- (a) notify the Secretary of State—

- (i) of those matters;
 - (ii) whether it is its opinion that, in relation to each parameter identified in accordance with paragraph (2)(b) or (4)(b), a failure in respect of that parameter is likely to recur;
 - (iii) of the action (if any) taken by it in relation to a failure which is attributable to the domestic distribution system or the maintenance of that system;
- (b) send a copy of that notice to any other relevant supplier which uses the supply system for the purposes of supplying water to consumers who are likely to be affected by the failure.
- (6) Where the water undertaker or combined licensee has identified a failure attributable to the domestic distribution system or the maintenance of that system, it must by notice in writing, at the same time as notification is given under paragraph (5), inform any person referred to in paragraph (7) of the nature of the failure and provide details of the steps (if any) that, in its opinion, it is necessary or desirable for those consumers to take in the interests of their health.
- (7) The persons that must be informed in accordance with paragraph (6) are—
- (a) those of its consumers who are likely to be affected by the failure, and
 - (b) any other relevant supplier which uses the supply system for the purposes of supplying water to consumers who are likely to be affected by the failure.
- (8) Where a notice is sent in accordance with paragraph (6), a copy of that notice must be sent to the Secretary of State and to each local authority whose area is likely to be affected by the failure.
- (9) A relevant supplier which receives a notice under paragraph (6) must immediately send or cause to be sent a copy of that notice to those of its consumers who are likely to be affected by the failure.
- (10) A water undertaker or combined licensee which has complied with the requirements of paragraphs (5) and (6) need not, in respect of the same failure or apprehended failure, comply with the requirements of regulation 35(6)(a)(iv).
- (11) Where such a failure as is mentioned in paragraph (1) relates to the copper or lead parameters (item 10 and 15 in Part I of Table B in Schedule 1), the relevant supplier must, as soon as is reasonably practicable after the occurrence, modify or replace such of its pipes and their associated fittings as it knows or has reason to believe have the potential for contributing to copper or lead in the water supplied to the premises, so as to eliminate that potential (whether or not the presence of copper or lead in those pipes contributed to the failure).

Investigations: indicator parameters

19.—(1) Where a water undertaker or combined licensee has reason to believe that water of a relevant description does not meet the specifications for indicator parameters set out in Schedule 2, it must immediately take such steps as are necessary to identify—

- (a) the reason why the specifications are not met;
- (b) the indicator parameters in respect of which the specifications are not met;
- (c) if the specification for the coliform bacteria or colony counts parameter (items 4 and 5 in Schedule 2) is not met, whether the inability to meet that specification is attributable—
 - (i) to the domestic distribution system,
 - (ii) to the maintenance of that system, or
 - (iii) to neither of those matters;
- (d) if the specification for the tritium parameter is not met, whether the inability to meet the specification is attributable to artificial radionuclides.

(2) As soon possible after the matters specified in paragraph (1) have been identified, the water undertaker or combined licensee must—

- (a) notify the Secretary of State—
 - (i) of those matters;

- (ii) whether it is its opinion that, in relation to each parameter identified in accordance with paragraph (1)(b), a recurrence of the inability to meet the specification in respect of that parameter is likely;
 - (b) send a copy of that notice to any other relevant supplier which uses the supply system for the purposes of supplying water to consumers who are likely to be affected by the failure.
- (3) Where, in a case to which paragraph (1)(c) applies, the inability to meet the specification has been attributable to the domestic distribution system or to the maintenance of that system, the water undertaker or licensed water supplier must, at the same time as notification is given under paragraph (2)—
- (a) by notice in writing to any person referred to in paragraph (4), inform them of the nature of the failure and provide details of the steps (if any) that, in its opinion, it is necessary or desirable for those consumers to take in the interests of their health;
 - (b) send a copy of that notice to the Secretary of State and to each local authority whose area is likely to be affected by the failure.
- (4) The persons referred to in paragraph (3)(a) are—
- (a) those of its consumers who are likely to be affected by the failure, and
 - (b) any other relevant supplier which uses the supply system for the purposes of supplying water to consumers who are likely to be affected by the failure.
- (5) A relevant supplier which receives a notice under paragraph (3)(a) must immediately send or cause to be sent a copy of that notice to those of its consumers who are likely to be affected by the failure.

Action by the Secretary of State

20.—(1) Where—

- (a) a notification given in accordance with paragraph (5) of regulation 18 in the circumstances mentioned in paragraph (1) of that regulation (including that paragraph as read with paragraph (3)(a) of that regulation) discloses—
 - (i) a failure in respect of a parameter specified in Table B in Schedule 1, and
 - (ii) that the failure is not attributable to the domestic distribution system or the maintenance of that system, and
- (b) it appears to the Secretary of State that the failure is not trivial and is likely to recur,

the Secretary of State may, by notice in writing to any relevant supplier which uses the supply system for the purposes of supplying water to consumers in respect of which the notification was given, require that relevant supplier to seek a departure from the provisions of Part 3 in accordance with regulation 22.

(2) The exercise by the Secretary of State of the power conferred by paragraph (1) does not preclude the exercise by the Secretary of State of the power conferred by section 18 of the Act(a).

(3) Where—

- (a) a notification given in accordance with regulation 18(5) in the circumstances mentioned in regulation 18(3)(b) discloses—
 - (i) a failure in relation to any parameter specified in Table B in Schedule 1, and
 - (ii) that the failure is not attributable to the domestic distribution systems or the maintenance of that system, and
- (b) it appears to the Secretary of State that the failure in respect of that parameter is not trivial and likely to recur,

(a) Section 18 was amended by sections 36(2) and 49(2) of, and paragraph 4 of Schedule 8 to, the Water Act 2003 (c.37). It is prospectively amended by paragraph 26 of Schedule 7 to the Water Act 2014 (c.21) from a date to be appointed.

the Secretary of State must consider whether to vary the terms of the authorisation under regulation 22.

(4) Where—

- (a) a notification given in accordance with regulation 19(2) discloses an inability to meet the specification applicable to an indicator parameter, and
- (b) the Secretary of State considers that the inability poses a potential danger to human health,

the Secretary of State must, by notice in writing to any relevant supplier which uses the supply system for the purposes of supplying water to consumers in respect of which the notification was given, require that relevant supplier to take such steps as may be determined by the Secretary of State and specified in the notice.

(5) A relevant supplier to whom a notice under paragraph (4) has been given must take the steps specified in the notice.

(6) On the coming into force of these Regulations—

- (a) a notice given under regulation 19(1) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (1) of this regulation;
- (b) a notice given under regulation 19(4) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (4) of this regulation.

Failure attributable to domestic distribution system where water is supplied to the public

21.—(1) Paragraph (3) applies where the Secretary of State considers that the failure (or, in the case of regulation 18, apprehended failure) disclosed by a notification under regulation 18(5) or regulation 19(2)—

- (a) is attributable to the domestic distribution system, or the maintenance of that system, in premises where water supplied for regulation 4(1) purposes is made available for members of the public, including schools within the meaning of the Education Act 1996(a), hospitals and restaurants,
- (b) is not trivial and is likely to recur, and
- (c) in the cases of a notification given under regulation 19(2), poses a potential danger to human health.

(2) References in this regulation to “failure” are references to a failure or apprehended failure of the type referred to in paragraph (1).

(3) Subject to paragraph (7), the Secretary of State must serve a notice in writing on—

- (a) the water undertaker that supplies water to the premises, or
- (b) the water undertaker whose supply system is used for the purpose of a licensed water supplier making a supply of water to the premises,

requiring it to exercise the power conferred by section 75(2) of the Act in respect of the failure.

(4) The provisions of section 75(2) to (12) of the Act(b) apply in relation to the exercise of the power in section 75(2) in pursuance of a notice served under paragraph (3), subject to the modifications in paragraph (5).

(5) Those modifications are—

- (a) subsections (2)(b) and (4) are to be read as if any reference to “damage, contamination, waste, misuse or undue consumption” were a reference to the failure;

(a) 1996 c.56.

(b) Section 75 was amended by paragraph 24 of Schedule 8 to the Water Act 2003 and paragraph 72 of Schedule 7 to the Water Act 2014.

(b) subsection (9) is to be read as if, for the opening words to the end of paragraph (b), there were substituted—

“(9) Where, in a case not falling within subsection (7)(a) or (b) above, any steps specified in a notice served by a water undertaker for the purposes of subsection (2)(b) above have not been taken by the end of the period so specified, the water undertaker—

- (a) must take those steps itself; and
- (b) subject to subsection (10) below may recover any expenses reasonably incurred by the undertaker in taking those steps from the person on whom the notice was served;”.

(6) Where the water undertaker exercises the power in section 75(2) of the Act pursuant to a notice served by the Secretary of State under paragraph (3), it must inform by notice in writing any of its other consumers who are likely to be affected of the steps it has taken, and such notice must include a copy of any notice that it has served.

(7) Where the Secretary of State considers that the failure (or any aspect of it) is attributable to factors arising from the further distribution by a person other than a water undertaker or licensed water supplier of water supplied by a water undertaker or licensed water supplier—

- (a) the Secretary of State must not serve a notice under paragraph (3) in respect of that failure or aspect of it;
- (b) if the Secretary of State considers that the local authority needs information or assistance from the water undertaker or licensed water supplier in order to be able to carry out its duties under regulation 15 or 16 of the Private Water Supplies (England) Regulations 2016(a), the Secretary of State must serve a notice on the water undertaker or licensed water supplier requiring it to provide such information or assistance to the local authority as is specified in the notice.

(8) The water undertaker or licensed water supplier on which a notice under this regulation has been served must take the steps specified in the notice.

(9) On the coming into force of these Regulations, a notice given under regulation 19A(3) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (3) of this regulation.

Authorisation of temporary supply of water that is not wholesome

22.—(1) The Secretary of State may, upon the written application of a relevant supplier, authorise in accordance with regulation 23 a departure from the provisions of Part 3 insofar as they relate to—

- (a) a parameter specified in Table B in Schedule 1, and
- (b) the supply of water by a relevant supplier in any of the water supply zones which it uses for the purposes of supplying water to consumers.

(2) But the Secretary of State must not authorise a departure under paragraph (1) unless the Secretary of State is satisfied that—

- (a) the authorisation is necessary to maintain in that zone a supply of water for regulation 4(1) purposes,
- (b) a supply of water for those purposes cannot be maintained in that zone by any other reasonable means, and
- (c) the supply of water in accordance with the authorisation does not constitute a potential danger to human health.

(3) Every water undertaker or combined licensee must provide with its application—

- (a) a statement—

(a) S.I. 2016/573.

- (i) of the grounds on which the authorisation is sought;
- (ii) of the water supply zone in respect of which the authorisation is sought;
- (iii) of the parameters in respect of which the prescribed concentration or value cannot be met;
- (iv) in respect of each parameter to which paragraph (iii) applies, of the results of the analysis of the samples taken in the water supply zone in question during the 12 months immediately preceding the first day on which the prescribed concentration or value could not be met;
- (v) in respect of each parameter to which paragraph (iii) applies, of the results of the analysis of the samples (if any) taken in the water supply zone in question between the first day on which the prescribed concentration or value could not be met and the date of the application;
- (vi) of the average daily quantity of water supplied to that zone or, if that quantity cannot readily be ascertained, of the average daily quantity of water supplied from the treatment works that supplies water to that zone;
- (vii) of the estimated population of that zone;
- (viii) as to whether, if a departure were authorised in the terms sought, any relevant food production undertaking would be affected;
- (ix) of the period for which the authorisation is sought;
- (x) of the reasons why the supply cannot be maintained by other reasonable means;
- (b) a scheme for monitoring the quality of water supplied in the zone during the period for which the authorisation is sought;
- (c) a summary of the steps that it proposes to take, either alone or together with other relevant suppliers, in order to secure that the supply fully satisfies the requirements of Part 3, including—
 - (i) a timetable for the work;
 - (ii) an estimate of the cost of the work;
 - (iii) provisions for reviewing the progress of the work and for reporting the results of the review to the Secretary of State.

(4) At the same time as it makes an application for an authorisation under paragraph (1), the water undertaker or combined licensee must serve a copy of the application and of the statement, scheme and summary referred to in paragraph (3) on—

- (a) every appropriate local authority;
- (b) Public Health England;
- (c) where the water supply zone is wholly or partly in Wales, the National Public Health Service for Wales;
- (d) the Council^(a).

(5) A body on whom documents have been served in accordance with paragraph (4) may make representations to the Secretary of State in connection with the application.

(6) Representations under paragraph (5) must be made within 30 days beginning with the date on which the application for the authorisation is made.

(7) On the coming into force of these Regulations, an authorisation given under regulation 20(1) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be an authorisation given under paragraph (1) of this regulation.

^(a) Section 219(1) of the Act defines “the Council” as the Consumer Council for Water.

Authorisations: terms and conditions

23.—(1) A departure may be authorised under regulation 22 for such period as is in the Secretary of State’s opinion reasonably required for securing a supply of water for regulation 4(1) purposes that fully satisfies the requirements of Part 3 (“the departure period”).

(2) But no departure period may exceed 3 years.

(3) Subject to paragraph (5), an authorisation under regulation 22—

(a) must specify—

(i) the grounds on which it is granted;

(ii) every water supply zone in respect of which it is granted;

(iii) the extent to which a departure from the prescribed concentration or value of any parameter is authorised;

(iv) in respect of each parameter to which paragraph (iii) applies, the results of the analysis of the samples taken in each water supply zone in question during the 12 months immediately preceding the first day on which the prescribed concentration or value could not be met;

(v) in respect of each parameter to which paragraph (iii) applies, the results of the analysis of the samples (if any) taken in each water supply zone in question between the first day on which the prescribed concentration or value could not be met and the date of the application;

(vi) the average daily quantity of water supplied from each of those zones or, if that quantity cannot readily be ascertained, the average daily quantity of water supplied from the treatment works that supplies water to that zone;

(vii) the estimated population of each of those zones;

(viii) whether or not any relevant food production undertaking would be affected;

(ix) the departure period;

(b) is to require the implementation of a scheme for monitoring the quality of water supplied in each of those zones during the departure period (which may be, but need not be, the scheme submitted in accordance with regulation 22(3)(b));

(c) is to require the carrying out of the steps which, in the relevant supplier’s opinion, are reasonably required in order to secure that the supply fully satisfies the requirements of Part 3 (whether or not the steps are those proposed in the summary submitted in accordance with regulation 22(3)(c));

(d) is to specify in relation to those steps—

(i) the timetable for the work;

(ii) an estimate of the cost of the work;

(iii) provisions for reviewing the progress of the work and for reporting to the Secretary of State the result of the review;

(e) is to require a relevant supplier to provide to the relevant population advice as to the measures (if any) that it would be advisable for them to take in the interests of their health for the whole or any part of the departure period.

(4) In paragraph (3)(e), “relevant population” means the population within the water supply zones to which the authorisation applies and, in particular, those groups of that population for which the supply of water in accordance with the authorisation could present a special risk.

(5) Where paragraph (6) applies, the particulars to be specified in the authorisation are those required by paragraph (3)(a)(iii) and (ix), and paragraph (3)(b) to (e) does not apply.

(6) This paragraph applies where the Secretary of State is of the opinion that—

(a) the extent of the contravention of the requirements of Part 3 as respects any parameter is trivial, and

- (b) the prescribed concentration or value as respects that parameter is likely to be achieved within the period of 30 days beginning with the day on which the prescribed concentration or value in respect of that parameter was contravened.

(7) Where it appears to the Secretary of State that a supply of water that fully satisfies the requirements of Part 3 cannot be restored by the end of the departure period, the Secretary of State may authorise a further departure.

(8) Paragraphs (1) to (6) apply to a further departure authorised under paragraph (7) as they apply to a departure authorised under regulation 22.

(9) Where it appears to the Secretary of State that a supply of water that fully satisfies the requirements of Part 3 cannot be restored by the end of the departure period relevant to an authorisation under paragraph (6), the Secretary of State may, in accordance with Article 9(2) of Council Directive 98/83/EEC on the quality of water intended for human consumption^(a), authorise a third departure.

(10) Paragraph (3) applies to a third departure authorised under paragraph (9) as it applies to a departure authorised under regulation 22, but is to be read as if for “Subject to paragraph (5)” there were substituted “Subject to any direction of the European Commission”.

(11) An authorisation under regulation 22 or this regulation may be limited to water supplied—

- (a) from particular sources or classes of source;
- (b) to particular water supply zones or to zones of particular descriptions.

(12) On the coming into force of these Regulations, any further authorisations given under regulation 21(5) and (7) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations are taken to be further authorisations given under paragraph (7) and (9) of this regulation.

Publicity for authorisations

24.—(1) As soon as reasonably practicable after a departure has been authorised under regulation 22 or 23, the specified relevant suppliers must—

- (a) separately publish by making accessible, free of charge, on their websites via a hyperlink maintained on their respective homepages for at least 14 days—
 - (i) except in a case to which paragraph (5) of regulation 23 applies, a notice containing a statement of the matters specified in paragraph (3)(a)(ii), (iii), (viii) and (ix) of that regulation;
 - (ii) in a case to which paragraph (5) of regulation 23 applies, a notice containing a statement of the matters specified in paragraph (3)(a)(ii), (iii) and (ix) of that regulation;
- (b) jointly give such other public notice of the authorisation and of its terms and conditions as the Secretary of State may, by notice served on the specified relevant suppliers, reasonably require.

(2) In paragraph (1), “specified relevant suppliers” means relevant suppliers who—

- (a) use the same water supply zone for the purposes of supplying water to consumers, and
- (b) for the purposes of that supply, rely on an authorised departure relating to the same facts.

Revocation and variation of authorisations

25.—(1) Subject to paragraphs (2) and (4), the Secretary of State may at any time revoke or vary an authorisation under regulation 22.

(a) OJ No L 330, 5.12.1998, p 32, as last amended by Commission Directive (EU) 2015/1787 (OJ No L 260, 7.10.2015, p 6).

(2) Subject to paragraph (3) the Secretary of State is not to revoke or modify an authorisation under regulation 22 without giving at least 6 months' notice in writing of the Secretary of State's intention to do so to—

- (a) the relevant supplier to which the authorisation relates;
- (b) any other relevant supplier which, for the purposes of supplying water to consumers, uses the water supply zone in respect of which the authorised departure has been given;
- (c) every appropriate local authority;
- (d) Public Health England;
- (e) where the authorisation relates to a water supply zone which is wholly or partly in Wales, the National Public Health Service for Wales;
- (f) the Council.

(3) The Secretary of State may revoke or vary an authorisation under regulation 22 without notice if it appears to the Secretary of State that immediate revocation or modification is required in the interests of public health.

(4) A relevant supplier on whose application a departure has been authorised under regulation 22 must notify the Secretary of State as soon as the circumstances which gave rise to the application cease to exist, and the Secretary of State must revoke the authorisation without the need for prior notice.

(5) In this regulation, “an authorisation under regulation 22” includes an authorisation for a further or third departure under regulation 23.

PART 8

Water treatment

Disinfection and other treatment arrangements

26.—(1) Unless the conditions in paragraph (5) are satisfied, before supplying water for regulation 4(1) purposes, a water undertaker or combined licensee must—

- (a) disinfect the water, and
- (b) where necessary, subject the water to sufficient preliminary treatment to prepare it for disinfection.

(2) A water undertaker or licensed water supplier must—

- (a) design, operate and maintain the disinfection process so as to keep disinfection by-products as low as possible without compromising the effectiveness of the disinfection, and
- (b) verify the effectiveness of the disinfection process.

(3) Paragraph (4) applies when any property, organism or substance is present in a water source at a level that may constitute a potential danger to human health

(4) Unless the conditions in paragraph (5) are satisfied, before supplying water for regulation 4(1) purposes using water from any source, a water undertaker or combined licensee must design and continuously operate an adequate treatment process for water from the source.

(5) The conditions are that the water undertaker or combined licensee—

- (a) must supply water from the treatment works as a matter of urgency in order to prevent an unexpected interruption in piped supply to consumers, and
- (b) before the supply is made, has taken all necessary steps to inform consumers that the water is not disinfected or adequately treated.

(6) For the purposes of this regulation—

- (a) “adequate treatment process” means a process of blending or purification treatment which removes or renders harmless the concentration or value of any property of water, or organism or substance in water, so that supplies do not constitute a potential danger to human health;
- (b) “sufficient preliminary treatment” means the treatment necessary—
 - (i) to remove, or to reduce the concentration or value of, any property or substance which would interfere with disinfection, and
 - (ii) to reduce turbidity to less than 1 NTU;
- (c) water is supplied for regulation 4(1) purposes when it leaves a treatment works.

Risk assessment

27.—(1) This regulation applies to every treatment works and supply system from which water is supplied for regulation 4(1) purposes.

(2) Every water undertaker or combined licensee must carry out a risk assessment of each of its treatment works and connected supply system in order to establish whether there is a significant risk of supplying water from those works or supply system that could constitute a potential danger to human health or is likely to be unwholesome.

(3) Every water undertaker or combined licensee must keep its risk assessments under continuous review.

(4) The Secretary of State may by notice served on a water undertaker or combined licensee require a risk assessment or review to be carried out by a date specified in the notice.

(5) Where a water undertaker or combined licensee becomes aware of any factors which make it likely that a risk assessment under this regulation would establish that there is a significant risk of supplying water that would constitute a potential danger to human health or that is likely to be unwholesome, it must notify the Secretary of State specifying the relevant factors.

(6) On the coming into force of these Regulations, a notice given under regulation 27(5) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (4) of this regulation.

Procedure following risk assessment and prohibition of supply

28.—(1) As soon as reasonably practicable after a water undertaker or combined licensee has carried out a risk assessment or review of such assessment under regulation 27, it must submit to the Secretary of State a report of the assessment or review.

(2) The report must contain—

- (a) a description of the methods used to carry out the assessment or review;
- (b) where the assessment or review establishes that there is no significant risk of supplying water that could constitute a potential danger to human health or could be unwholesome, a statement confirming this;
- (c) where the assessment or review establishes that measures have been taken to remove a significant risk of supplying water that could constitute a potential danger to human health or be unwholesome—
 - (i) monitoring data which verifies this;
 - (ii) details of those measures.

(3) Where the assessment or review establishes that there is a significant risk of supplying water that could constitute a potential danger to human health or could be unwholesome, the report must—

- (a) contain a full explanation including details of every property, organism or substance that has been identified as contributing to the risk;
- (b) specify the measures to mitigate the risk that the water undertaker or combined licensee—

- (i) has made operational as at the date of the report, and
- (ii) intends to make operational.

(4) Where the Secretary of State has received a report which states that there is or has been a significant risk of supplying water that could constitute a potential danger to human health or could be unwholesome, the Secretary of State may, by notice served on the water undertaker or combined licensee, require the water undertaker or combined licensee—

- (a) to maintain such specified measures for such period of time as the Secretary of State considers appropriate to mitigate the risk;
- (b) to review, revise or make operational such specified measures by such date as the Secretary of State considers appropriate to mitigate the risk;
- (c) to audit whether the measures have been effective by such means as may be specified;
- (d) not to supply water for regulation 4(1) purposes from specified treatment works or supply systems, or not to so supply unless specified conditions are satisfied;
- (e) to give the Secretary of State such information as the Secretary of State may require to monitor progress towards mitigation of that risk.

(5) In paragraph (4), “specified” means specified in the notice served under that paragraph.

(6) The Secretary of State may, by notice served on the relevant undertaker or licensed water supplier, revoke or vary a notice served under paragraph (4).

(7) On the coming into force of these Regulations, a notice given under regulation 28(4) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (4) of this regulation.

Water treatment to minimise contamination from pipes

29.—(1) Paragraph (2) applies where there is a risk (“the prescribed risk”) that water supplied by a relevant supplier would, for the reason mentioned in paragraph (3), after leaving the relevant supplier’s pipes—

- (a) contain a concentration of copper in excess of 2mg/litre, or
- (b) contain a concentration of lead in excess of 10µg/litre.

(2) Every water undertaker or combined licensee which introduces water into the supply system used by the relevant supplier must, subject to paragraph (4), treat the water in such a way as will, in its opinion, eliminate the prescribed risk or reduce it to a minimum.

(3) The reason referred to in paragraph (1) is the presence in the water of a concentration of copper or lead which is attributable to the fact that copper or lead is the major component of such a pipe as is mentioned in section 68(3) of the Act(a), or its associated fittings.

(4) Paragraph (1) does not require a water undertaker or combined licensee to treat water if—

- (a) the treatment is unlikely to achieve a significant reduction in the concentration of copper or lead, or
- (b) treatment is not reasonably practicable.

Replacement of lead pipes

30.—(1) The relevant supplier must modify or replace its part of the pipe where a relevant supplier—

- (a) has received from the owner of premises to which water is so supplied notice in writing of—
 - (i) the owner’s intention to replace so much of the pipe as belongs to him, and
 - (ii) the owner’s desire that the relevant supplier replaces the remainder of the pipe, and

(a) Section 68(3) was amended by paragraph 18(5) of Schedule 8 to the Water Act 2003 (c.37).

- (b) has reason to believe that water supplied by it for regulation 4(1) purposes from a pipe to which paragraph (2) applies contains, or is likely to contain, at the consumer's tap, a concentration of lead which exceeds 10µg/litre.
- (2) This paragraph applies to a pipe—
- (a) of which the major component is lead,
 - (b) which is subject to water pressure from a water main or would be so subject but for the closing of some valve, and
 - (c) of which part belongs to a relevant supplier and of which the remainder belongs to the owner of any premises to which the relevant supplier supplies water for regulation 4(1) purposes.

Application and introduction of substances and products

31.—(1) Subject to paragraph (2), a water undertaker or combined licensee must not apply any substance or product to, or introduce any substance or product into, water which is to be supplied for regulation 4(1) purposes, unless one of the requirements of paragraph (4) is satisfied.

- (2) A substance or product which, at the time of its application or introduction—
- (a) bears an appropriate CE marking in accordance with the Construction Products Regulation, or
 - (b) conforms to an appropriate British Standard or some other appropriate standard of an EEA state or Turkey which provides an equivalent level of protection and performance,

may be applied or introduced, notwithstanding that none of the requirements of paragraph (4) is satisfied.

- (3) Paragraph (2) applies only if such an application or introduction complies with—
- (a) such conditions of use restricting the dosing concentration as are for the time being in force in relation to such substances and products pursuant to a determination of the Secretary of State by an instrument in writing;
 - (b) such other requirements, within the meaning of the Technical Standards Directive, in relation to such substances and products, as have been communicated to the European Commission in the form of a draft technical regulation in accordance with Article 8 of that Directive, and whose adoption by a member State has also been communicated to the European Commission.

- (4) The requirements of this paragraph are that—
- (a) the Secretary of State has for the time being approved the application or introduction of that substance or product and it is applied or introduced in accordance with any conditions attaching to that approval;
 - (b) the Secretary of State is satisfied that the application or introduction of the substance or product either alone or in combination with any other substance or product in the water is unlikely to adversely affect the quality of the water supplied;
 - (c) the substance or product is to be applied or introduced solely for the purposes of testing or research, and the water undertaker or combined licensee has given to the Secretary of State not less than 3 months' notice in writing of its intention so to apply or introduce the substance or product.

(5) An application for an approval mentioned in paragraph 4(a) may be made by any person.

(6) If the Secretary of State decides to issue an approval under paragraph 4(a), the Secretary of State may include in the approval such conditions as the Secretary of State considers appropriate and, in accordance with paragraph (10), may at any time revoke or vary any approval that the Secretary of State has previously given.

(7) Where substances or products are applied or introduced in any case in which the requirement mentioned in paragraph (4)(c) is satisfied, their application or introduction must be discontinued within 12 months of the date on which they were first applied or introduced or, if the Secretary of

State by notice given in writing to the water undertaker or combined licensee so directs, within such other period (whether longer or shorter) as may be specified in the notice.

(8) The Secretary of State may, by notice given in writing to any water undertaker or combined licensee, prohibit it from applying to, or introducing into, water intended to be supplied for regulation 4(1) purposes any substance or product which the water undertaker or licensee would otherwise be authorised to apply or introduce by virtue of—

- (a) paragraphs (1) and (4)(b) or (c), or
- (b) paragraph (2).

(9) A prohibition under paragraph (8) may be without limitation as to time or for such period as is specified in the notice.

(10) Subject to paragraph (11), the Secretary of State may—

- (a) revoke by an instrument in writing any approval given by him under paragraph (4)(a);
- (b) vary any such approval by an instrument in writing by including conditions or varying existing conditions;
- (c) give any such notice as is mentioned in paragraph (8).

(11) Unless the Secretary of State is satisfied that it is necessary to do so in the interests of public health without notice, the Secretary of State must not act under paragraph (10) without giving all such persons as are, in the Secretary of State's opinion, likely to be affected by the revocation or variation of the approval or by the giving of the notice, at least 6 months' notice in writing.

(12) Notwithstanding paragraph (11), the Secretary of State must give immediate notice to all persons likely to be affected by the revocation or variation of an instrument mentioned in paragraph (10)(a) or (b).

(13) At least once in each year the Secretary of State must issue a list of all the substances and products, with particulars of the action taken, in relation to which—

- (a) an approval under paragraph 4(a) has been granted or refused;
- (b) such an approval has been revoked or varied;
- (c) a notice has been given under paragraph (8).

(14) The Secretary of State may—

- (a) by notice served on the person who makes an application for approval under paragraph (4)(a), require the person to pay the Secretary of State a charge which reflects the administrative expenses incurred or likely to be incurred by the Secretary of State in connection with the application;
- (b) in determining the amount of any such charge, adopt such methods and principles for its calculation as appear to the Secretary of State to be appropriate.

(15) In this regulation—

- (a) "the Construction Products Regulation" means Regulation (EU) No 305/2011 of the European Parliament and of the Council laying down harmonised conditions for the marketing of construction products^(a);
- (b) "the Technical Standards Directive" means Directive (EU) 2015/1535 of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services^(b).

(16) On the coming into force of these Regulations—

(a) OJ No L 88, 4.4.2011, p 5, as last amended by Commission Delegated Regulation (EU) No 574/2014 (OJ No L 159, 28.5.2014, p 41).

(b) OJ No L 241, 17.9.2015, p 1.

- (a) an approval given under regulation 31(4)(a) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (4)(a) of this regulation;
- (b) a notice given under regulation 31(7) or (8) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (7) or (8) respectively of this regulation.

Use of processes

32.—(1) The Secretary of State may at any time, by notice in writing given to a water undertaker or combined licensee, require it to make an application to the Secretary of State for approval of the use of any process, and may prohibit it for such period as may be specified in the notice from using any such process in connection with the supply by it of water for regulation 4(1) purposes.

(2) The Secretary of State may refuse the application or impose on any approval given for the purposes of this regulation such conditions as the Secretary of State thinks fit and, subject to paragraph (3), may at any time by notice in writing to the water undertaker or combined licensee revoke an approval so given, or revoke or vary any condition imposed by virtue of this paragraph.

(3) Subject to paragraph (4), unless the Secretary of State has given to the water undertaker or combined licensee at least 6 months' notice in writing of the Secretary of State's intention to revoke, vary or prohibit, as the case may be, the Secretary of State must not—

- (a) revoke any approval given for the purposes of this regulation;
- (b) vary any condition imposed by virtue of paragraph (2);
- (c) prohibit a water undertaker or combined licensee from using any process.

(4) Paragraph (3) does not apply in any case in which the Secretary of State is of the opinion that the immediate revocation, modification or prohibition is necessary in the interests of public health.

(5) Regulation 31(13) applies for the purposes of this regulation, to be read as if—

- (a) for the reference to substances or products there were substituted a reference to processes;
- (b) for the reference to paragraph (4)(a) there were substituted a reference to this regulation; and
- (c) for the reference to paragraph (8) there were substituted a reference to paragraph (1) of this regulation.

(6) On the coming into force of these Regulations—

- (a) a notice given under regulation 32(1) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be a notice given under paragraph (1) of this regulation;
- (b) an approval given under regulation 32(2) of the 2000 Regulations which had effect immediately before the coming into force of these Regulations is taken to be an approval given under paragraph (2) of this regulation.

Offences

33.—(1) A water undertaker or combined licensee which contravenes regulation 26(1) or (4) or the terms of a notice served under regulation 28(4)(d) is guilty of an offence and liable on summary conviction, or on conviction on indictment, to a fine.

(2) In any proceedings against a water undertaker or combined licensee for an offence under paragraph (1), it is a defence for that water undertaker or combined licensee to show that it took all reasonable steps and exercised all due diligence to avoid the commission of the offence.

(3) A water undertaker or combined licensee which—

- (a) applies or introduces any substance or product in contravention of regulation 31(1) or a notice given under regulation 31(8), or

(b) uses any process in contravention of a prohibition imposed under regulation 32(1) or without complying with a condition imposed by virtue of regulation 32(2),
is guilty of an offence and liable on summary conviction, or on conviction on indictment, to a fine.

(4) If any person, in furnishing any information or making an application under regulation 31 or 32, makes any statement which that person knows to be false in a material particular, or recklessly makes any statement which is false in a material particular, that person is guilty of an offence and liable on summary conviction, or on conviction on indictment, to a fine.

(5) Proceedings for an offence under paragraph (4) must not be instituted except by or with the consent of the Secretary of State or the Director of Public Prosecutions.

PART 9

Records and information

Maintenance of records

34.—(1) Every water undertaker or combined licensee must, in respect of each of the water supply zones which it uses for the purposes of supplying water to consumers, prepare and maintain a record containing—

- (a) the name of the zone;
- (b) the name of every water treatment works, service reservoir and other supply point from which water is supplied to premises within the zone;
- (c) an estimate of the population of the zone;
- (d) particulars of any departure authorised under Part 7 of these Regulations which applies to water supplied in the zone;
- (e) particulars of the action taken or required to be taken by the water undertaker or licensed water supplier to comply with—
 - (i) any enforcement order made under section 18 of the Act^(a);
 - (ii) any departure authorised under Part 7;
 - (iii) any notice under regulation 20(4);
- (f) particulars of the result of any analysis of samples taken in accordance with Part 4 of these Regulations or any of regulations 12 to 14, 17 and 28;
- (g) the results of any electronic monitoring where this is carried out in accordance with these Regulations;
- (h) particulars of all consumer contacts made in relation to the discharge of duties under these Regulations;
- (i) such other particulars as the water undertaker or licensed water supplier may determine.

(2) A retail licensee must, in respect of each of the water supply zones which it uses for the purposes of supplying to consumers, prepare and maintain a record containing—

- (a) the name of the water supply zone;
- (b) particulars of any departure authorised under Part 7 of these Regulations which applies to water supplied in the zone;
- (c) particulars of the action taken or required to be taken by the retail licensee to comply with—
 - (i) any enforcement order made under section 18 of the Act;
 - (ii) any departure authorised under Part 7;

(a) Section 18 was amended by sections 36(2) and 49(2) of, and paragraph 4 of Schedule 8 to, the Water Act 2003 (c.37). It is prospectively amended by paragraph 26 of Schedule 7 to the Water Act 2014 (c.21) from a date to be appointed.

- (iii) any notice under regulation 20(4);
 - (d) such other particulars as the retail licensee may determine.
- (3) A water undertaker or combined licensee must make entries in the record —
- (a) in respect of the matters mentioned in paragraph (1)(a) to (d) and (e)(ii), as soon as reasonably practicable and no later than 3 months after the day on which it first introduces water into a supply system for the purposes of supplying water to consumers;
 - (b) in respect of the matters mentioned in paragraph (1)(e)(i) and (iii), within 28 days of the date of the order and notice respectively;
 - (c) relating to the results of the analysis of samples, within 28 days of the day on which the result is first known to the water undertaker or combined licensee.
- (4) A retail licensee must make—
- (a) initial entries in the record in respect of the matters mentioned in paragraph (2)(a), (b) and (c)(ii) no later than 3 months after the day on which it first uses a supply system for the purposes of supplying water to consumers;
 - (b) entries in the record in respect of the matters mentioned in paragraph (2)(c)(i) and (iii) within 28 days of the date of the order and notice respectively.
- (5) Without prejudice to paragraph (3), the relevant supplier must at least once in each year review and update the record required to be kept under paragraph (1) or (2).
- (6) Nothing in this regulation requires a relevant supplier to retain a record—
- (a) of information mentioned in any of sub-paragraphs (a), (b) and (f) of paragraph (1) or in sub-paragraph (a) of paragraph (2) at any time more than 30 years after the date on which the information was first entered in the record;
 - (b) of information mentioned in any other sub-paragraph of paragraph (1) or (2) at any time more than 5 years after the date on which the information was first entered in the record.

Provision of information

35.—(1) Any person may request a relevant supplier to send them a copy of any record maintained by the relevant supplier under regulation 34, and the relevant supplier must, within 7 days of the receipt of the request, send a copy of the record requested to the person.

(2) A relevant supplier must comply with a request under paragraph (1)—

- (a) in the case of a request relating to a water supply zone, free of charge if the person receives a supply of water in the zone;
- (b) in any other case, on payment of such reasonable charge as the relevant supplier may determine.

(3) Paragraph (1) does not oblige a relevant supplier to comply with a request which is vexatious.

(4) Where a relevant supplier has previously complied with a request made by any person, paragraph (1) does not oblige it to comply with a subsequent identical or substantially similar request from that person unless a reasonable interval has elapsed between compliance with the previous request and the making of the subsequent request.

(5) A water undertaker must include in, or append to, at least one of the accounts sent to each customer in any year a statement setting out the rights of that customer under paragraph (1).

(6) As soon as possible after an event which, by reason of its effect or likely effect on the water supplied by a relevant supplier, gives rise or is likely to give rise to a significant risk to human health, the relevant supplier must notify—

- (a) in every case—
 - (i) every appropriate local authority,
 - (ii) Public Health England,
 - (iii) the Council, and

- (iv) the Secretary of State; and
- (b) in any case where the event gives rise or is likely to give rise to a significant risk to human health in Wales—
 - (i) the National Public Health Service for Wales, and
 - (ii) the Welsh Ministers.

(7) Where a person has received a notification under paragraph (6), that person may require the relevant supplier to provide that person with such further information relating to the event and its consequences as that person may reasonably require.

PART 10

Functions of local authorities in relation to water quality

Application and interpretation of this Part

36.—(1) This Part applies to the performance by a local authority of its duty under section 77(1) of the Act insofar as that duty relates to water supplies which are not private supplies.

(2) In this Part, “specified relevant supplier” in relation to a local authority means—

- (a) a water undertaker any of whose water supply zones includes an area which is situated within the area of that authority;
- (b) a licensed water supplier which uses any such water supply zones for the purposes of supplying water to consumers.

Duties of local authorities: supplementary provision

37.—(1) In performing its duty under section 77(1) of the Act, a local authority—

- (a) must make arrangements with the specified relevant supplier to secure that the authority is notified as mentioned in regulation 35(6)(a)(i);
- (b) may take or cause to be taken, and analyse or cause to be analysed, by a person, designated by that authority in writing, such samples of the water supplied to premises in its area as that authority may reasonably require.

(2) Regulation 16 applies to samples taken by virtue of paragraph (1) as it applies to samples taken for the purposes of Parts 4 and 5 of these Regulations but with the following modifications—

- (a) paragraph (1) is to be read as if for the words “water undertaker or combined licensee” there were to be substituted the words “local authority”;
- (b) paragraph (2)(e)(i) is to be read as if for the words “the water undertaker or the combined licensee” there were to be substituted “the water undertaker, the combined licensee or the local authority”.

PART 11

Enforcement

Contraventions by relevant suppliers

38. Any duty or requirement imposed by Parts 4 to 9 of these Regulations on a relevant supplier is enforceable under section 18 of the Act by the Secretary of State or the Authority(**a**), whether or not it constitutes an offence.

PART 12

Review

Review

39.—(1) The Secretary of State must, in relation to England, from time to time—

- (a) carry out a review of the regulatory provision in these Regulations, and
- (b) publish a report setting out the conclusions of the review.

(2) In carrying out a review of any regulatory provision which implements an obligation in Council Directive 98/83/EC on the quality of water intended for human consumption(**b**) and Council Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption(**c**), the Secretary of State must have regard to how the obligation is implemented in other member States.

(3) The report must in particular—

- (a) set out the objectives intended to be achieved by the regulatory provision,
- (b) assess the extent to which those objectives are achieved,
- (c) assess whether those objectives remain appropriate, and
- (d) if those objectives remain appropriate, assess the extent to which they could be achieved in another way which involves less onerous regulatory provision

(4) The first report under this regulation must be published before the end of the period of five years beginning with the day on which these Regulations come into force.

(5) Subsequent reports under this regulation must be published at intervals not exceeding five years.

(6) In this regulation, “regulatory provision” has the meaning given by section 32(4) of the Small Business, Enterprise and Employment Act 2015(**d**).

PART 13

Amendments and revocations

Amendments and revocations

40.—(1) The Regulations specified in the Table in Schedule 6 are amended in accordance with the provisions of that Table.

(a) Section 219(1) of the Act defines “the Authority” as the Water Services Regulation Authority.
(b) OJ No L 330, 5.12.1998, p 32, as last amended by Commission Directive (EU) 2015/1787 (OJ No L 260, 7.10.2015, p 6).
(c) OJ No L 296, 7.11.2013, p 12.
(d) 2015 c. 26.

(2) The Regulations specified in the Table in Schedule 7 are revoked to the extent specified in that Table.

26th May 2016

Rory Stewart
Parliamentary Under Secretary of State
Department for Environment, Food and Rural Affairs

SCHEDULE 1

Regulation 2

Prescribed concentrations and values

Table A

Microbiological parameters

Part I: Directive requirements

(1) <i>Item</i>	(2) <i>Parameters</i>	(3) <i>Concentration or value (maximum)</i>	(4) <i>Units of measurement</i>	(5) <i>Point of compliance</i>
1.	<i>Enterococci</i>	0	number/100ml	Consumers' taps
2.	<i>Escherichia coli</i> (<i>E. coli</i>)	0	number/100ml	Consumers' taps

Part II: National requirements

(1) <i>Item</i>	(2) <i>Parameters</i>	(3) <i>Concentration or value (maximum)</i>	(4) <i>Units of measurement</i>	(5) <i>Point of compliance</i>
1.	Coliform bacteria	0	number/100ml	Service reservoirs ^(*) and water treatment works
2.	<i>Escherichia coli</i> (<i>E. coli</i>)	0	number/100ml	Service reservoirs and water treatment works

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

Table B

Chemical parameters

Part I: Directive requirements

(1) <i>Item</i>	(2) <i>Parameters</i>	(3) <i>Concentration or value (maximum)</i>	(4) <i>Units of measurement</i>	(5) <i>Point of compliance</i>
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	µgBrO ₃ /l	Consumers' taps
8.	Cadmium	5.0	µgCd/l	Consumers' taps
9.	Chromium	50	µgCr/l	Consumers' taps
10.	Copper	2.0	mgCu/l	Consumers' taps

11.	Cyanide	50	µgCN/1	Consumers' taps
12.	1, 2 dichloroethane	3.0	µg/1	Consumers' taps
13.	Epichlorohydrin	0.10	µg/1	(i)
14.	Fluoride	1.5	mgF/1	Consumers' taps
15.	Lead	10	µgPb/1	Consumers' taps
16.	Mercury	1.0	µgHg/1	Consumers' taps
17.	Nickel	20	µgNi/1	Consumers' taps
18.	Nitrate ⁽ⁱⁱ⁾	50	mgNO3/1	Consumers' taps
19.	Nitrite ⁽ⁱⁱ⁾	0.50	mgNO2/1	Consumers' taps
		0.10		Treatment works
20.	Pesticides ^{(iii) (iv)}	0.030	µg/1	Consumers' taps
	Aldrin			
	Dieldrin	0.030	µg/1	Consumer's taps
	Heptachlor			
	Heptachlor epoxide			
	Other pesticides	0.10	µg/1	Consumers' taps
21.	Pesticides: total ^(v)	0.50	µg/1	Consumers' taps
22.	Polycyclic aromatic hydrocarbon ^(vi)	0.10	µg/1	Consumers' taps
23.	Selenium	10	µgSe/1	Consumers' taps
24.	Tetrachloroethene and Trichloroethene ^(vii)	10	µg/1	Consumers' taps
25.	Trihalomethanes: Total ^(viii)	100	µg/1	Consumers' taps
26.	Vinyl chloride	0.50	µg/1	(i)

(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 4(2)(d).

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

(iv) The parametric value applies to each individual pesticide.

(v) "Pesticides: total" means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure.

(vi) 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.

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

(viii) 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

(1)	(2)	(3)	(4)	(5)
<i>Item</i>	<i>Parameters</i>	<i>Concentration or value (maximum)</i>	<i>Units of measurement</i>	<i>Point of compliance</i>
1.	Aluminium	200	µgAl/l	Consumers' taps
2.	Colour	20	mg/l Pt/Co	Consumers' taps
3.	Iron	200	µgFe/l	Consumers' taps
4.	Manganese	50	µgMn/l	Consumers' taps
5.	Odour	Acceptable to consumers and no abnormal change		Consumers' taps
6.	Sodium	200	mgNa/l	Consumers' taps
7.	Taste	Acceptable to consumers and no abnormal change		Consumers' taps
8.	Tetrachloromethane	3	µg/l	Consumers' taps
9.	Turbidity	4	NTU	Consumers' taps

SCHEDULE 2

Regulation 2

Indicator parameters

(1)	(2)	(3)	(4)	(5)
<i>Item</i>	<i>Parameters</i>	<i>Specification concentration or value (maximum unless otherwise stated) or state</i>	<i>Units of measurement</i>	<i>Point of compliance</i>
1.	Ammonium	0.50	mgNH ₄ /l	Consumers' taps
2.	Chloride ⁽ⁱ⁾	250	mgCl/l	Supply point ^(*)
3.	<i>Clostridium Perfringens (including spores)</i>	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
6.	Conductivity ⁽ⁱ⁾	2500	µS/cm at 20°C	Supply point ^(*)
7.	Hydrogen ion	9.5 (maximum) 6.5 (minimum)	pH value	Consumers' taps
8.	Indicative dose ⁽ⁱⁱ⁾	0.10	mSv	Supply point ^(*)
	(a) gross alpha	0.1	Bq/l	Supply point ^(*)
	(b) gross beta	1	Bq/l	Supply point ^(*)
9.	Radon ⁽ⁱⁱⁱ⁾	100	Bq/l	Supply point
10.	Sulphate ⁽ⁱ⁾	250	mgSO ₄ /l	Supply point ^(*)
11.	Total organic carbon (TOC)	No abnormal change	mgC/l	Supply point
12.	Tritium (for radioactivity) ^(iv)	100	Bq/l	Supply point ^(*)
13.	Turbidity	1	NTU	Treatment works

⁽ⁱ⁾ The water should not be aggressive.

(ii) Where treatment to reduce the level of radionuclides in water intended for human consumption has been taken, monitoring must be carried out to ensure the continued efficacy of the treatment.

(iii) Remedial action may be taken by the Secretary of State on radiological protection grounds without further consideration and deemed to be justified where radon concentrations exceed 1,000 Bq/l.

(iv) If tritium concentration exceeds its parametric value, an investigation (which may include analysis) of the presence of artificial radionuclides is required.

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

SCHEDULE 3

Regulation 6

Monitoring

Table 1

Parameters and circumstances for check monitoring

(1) <i>Item</i>	(2) <i>Parameter</i>	(3) <i>Circumstances</i>
1.	Aluminium	When used as flocculant or where the water originates from, or is influenced by, surface waters
2.	Ammonium	
3.	<i>Clostridium perfringens</i> (including spores)	Where the water originates from, or is influenced by, surface waters
4.	Coliform bacteria	
5.	Colony counts	
6.	Colour	
7.	Conductivity	
8.	<i>Escherichia coli</i> (<i>E. coli</i>)	
9.	Hydrogen ion	
10.	Iron	When used as flocculant or where the water originates from, or is influenced by, surface waters
11.	Manganese	Where the water originates from, or is influenced by, surface waters
12.	Nitrate	When chloramination is practised
13.	Nitrite	When chloramination is practised
14.	Odour	
15.	Taste	
16.	Turbidity	

Table 2

Annual sampling frequencies: water supply zones

Note: This table sets out the annual sampling frequencies for all the substances and parameters in column 1. These are determined for each water supply zone according to its estimated population (column 2). The number of samples is either the standard number in column 4 or the reduced number in column 3 (if one is given). Regulation 9 provides for the circumstances in which the reduced number of samples may be taken.

(1) <i>Substances and parameters subject to monitoring</i>	(2) <i>Estimated population of water supply zone</i>	(3) <i>Reduced</i>	(4) <i>Standard</i>
<i>Subject to check monitoring</i>			

E. coli	<100		4
Coliform bacteria	≥100		12 per 5,000
Residual disinfectant			Population ⁽ⁱ⁾
Aluminium	<100	1	2
Ammonium	100-4,999	2	4
Clostridium perfringens	5,000-9,999	6	12
(including spores)	10,000-29,999	12	24
Colony counts	30,000-49,999	18	36
Colour	50,000-79,999	26	52
Conductivity ⁽ⁱⁱ⁾	80,000-100,000	38	76
Hydrogen ion			
Iron			
Manganese			
Nitrate ⁽ⁱⁱⁱ⁾			
Nitrite			
Odour			
Taste			
Turbidity			
<i>Subject to audit monitoring</i>			
Aluminium	<100		1
Antimony	100-4,999		4
Arsenic	5,000-100,000		8
Benzene ⁽ⁱⁱ⁾			
Benzo(a)pyrene			
Boron ⁽ⁱⁱ⁾			
Bromate ^(iv)			
Cadmium			
Chromium			
Clostridium perfringens			
(including spores)			
Copper			
Cyanide ⁽ⁱⁱ⁾			
1,2 dichloroethane ⁽ⁱⁱ⁾			
Enterococci			
Fluoride ⁽ⁱⁱ⁾			
Gross alpha ^{(ii) (v) (vi)}			
Gross beta ^{(ii) (v) (vi)}			
Iron			
Lead			
Manganese			
Mercury ⁽ⁱⁱ⁾			
Nickel			
Nitrate ⁽ⁱⁱⁱ⁾			
Nitrite ⁽ⁱⁱⁱ⁾			
Pesticides and related			
products ⁽ⁱⁱ⁾			
Polycyclic aromatic			
hydrocarbons			
Radon ^{(ii) (vi)}			
Selenium			
Sodium			
Trichloroethene			
Tetrachloroethene ⁽ⁱⁱ⁾			

Tetrachloromethane⁽ⁱⁱ⁾
 Trihalomethanes
 Chloride⁽ⁱⁱ⁾
 Sulphate⁽ⁱⁱ⁾
 Total organic carbon⁽ⁱⁱ⁾
 Tritium^{(ii) (vi)}

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

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

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

(iv) 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.

(v) To monitor for indicative dose.

(vi) In the event that a single sample is taken in a year, a further sample should be taken if there is any change in relation to that supply that could affect the concentration of radionuclides in the water supply.

Table 3

Annual sampling frequencies: treatment works or supply points

Note 1: Sampling is at treatment works for the substances and parameters in column 2 of the Table (items (1) to (6)) and at supply points for the other substances and parameters, except nitrite, subject to footnotes (i) and (iv) to the Table below.

Note 2: This Table sets out the annual sampling frequencies for all the substances and parameters in column 2 at treatment works or supply points. The frequencies are determined according to the volume of water supplied at each treatment works or supply point (column 3). The number of samples is either the standard number in column 5 or the reduced number in column 4 (if one is given). Regulation 9 provides for the circumstances in which the reduced number of samples may be taken.

(1) <i>Item</i>	(2) <i>Substances and parameters</i>	(3) <i>Volume of water supplied m³/d</i>	(4) <i>Reduced</i>	(5) <i>Standard</i>
1.	<i>E. coli</i>	<20	-	4
2.	Coliform bacteria	20–1,999	12	52
3.	Colony counts	2,000–5,999	52	104
4.	Nitrite ⁽ⁱ⁾	6,000–11,999	104	208
5.	Residual disinfectant	≥12,000	104	365
6.	Turbidity			
<i>Subject to check monitoring</i>				
7.	<i>Clostridium perfringens</i> ⁽ⁱⁱ⁾	<20	-	2
8.	Conductivity	20–999	2	4
		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
<hr/>				
<i>Subject to audit monitoring</i>				
9.	Benzene	<20		1
10.	Boron	20-999		4
11.	Bromate ⁽ⁱⁱⁱ⁾	1,000-49,999		8
12.	<i>Clostridium</i>	50,000-89,999		12
	<i>Perfringens</i> (including spores)	90,000-299,999		24
13.	Cyanide	300,000-649,999		36
14.	1,2 dichloroethane	≥650,000		48
15.	Fluoride			
16.	Indicative dose			
17.	Mercury			
18.	Nitrite ^(iv)			
19.	Pesticides and related products			
20.	Radon			
21.	Trichloroethene/ Tetrachloroethene			
22.	Tetrachloromethane			
23.	Chloride			
24.	Sulphate			
25.	Total organic carbon			
26.	Tritium			
27.	Gross alpha ^(v)			
28.	Gross beta ^(v)			

(i) Sampling is at treatment works when chloramination is practised.

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

(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) Sampling at treatment works when chloramination is not practised.

(v) To monitor for indicative dose.

SCHEDULE 4

Regulation 6

Monitoring for indicative dose and analytical performance characteristics

Monitoring for compliance with the ID

1.—(1) A water undertaker may use various reliable screening strategies to indicate the presence of radioactivity in water intended for human consumption.

(2) These strategies may include screening for—

- (a) certain radionuclides, or screening for an individual radionuclide,
- (b) gross alpha activity or gross beta activity screening.

Screening for certain radionuclides or for an individual radionuclide

2.—(1) If one of the activity concentrations exceeds 20% of the corresponding derived value or the tritium concentration exceeds its parametric value listed in Schedule 2, an analysis of additional radionuclides is required.

(2) In deciding which radionuclides are required to be measured for each supply, a water undertaker must take into account all relevant information about likely sources of radioactivity.

Screening strategies for gross alpha activity and gross beta activity

3.—(1) A water undertaker may use a screening strategy for gross alpha and gross beta to monitor for the parametric indicator value for indicative dose.

(2) Subject to paragraph (3), the recommended screening values are—

- (a) 0.1Bq/l for gross alpha activity;
- (b) 1.0Bq/l for gross beta activity^(a).

(3) If the gross alpha activity exceeds 0.1Bq/l or the gross beta activity exceeds 1.0Bq/l, analysis for specific radionuclides is required.

(4) The Secretary of State may set alternative screening levels for gross alpha activity and gross beta activity where it can be demonstrated by the water undertaker that the alternative levels are in compliance with an ID of 0.1 mSv.

(5) The radionuclides to be measured must be based on all relevant information about likely sources of radioactivity.

Calculation of the ID

4.—(1) The ID must be calculated from—

- (a) the measured radionuclide concentrations and the dose coefficients laid down in Table A in Annex III to Council Directive 96/29/Euratom laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation^(b), or
- (b) more recent information recognised by the Secretary of State, on the basis of the annual intake of water (730 litres for adults).

(2) Where the following formula is satisfied, it can be assumed that the ID is less than the parametric value of 0.1 mSv and no further investigation is required—

$$\sum_{i=1}^n \frac{C_i(obs)}{C_i(der)} \leq 1$$

where—

“ $C_i(obs)$ ” means observed concentration of radionuclide i ;

“ $C_i(der)$ ” means derived concentration of radionuclide i ;

“ n ” means number of radionuclides detected.

Table 1

Derived concentrations for radioactivity in water intended for human consumption

-
- (a) Where appropriate gross beta activity may be replaced by residual beta activity after subtraction of the K-40 activity concentration.
 - (b) OJ No L 159, 29.6.1996, p 1, which is prospectively repealed by Council Directive 2013/59/Euratom (OJ No L 13, 17.1.2014, p 1) from 6th February 2018.

This table includes values for the most common natural and artificial radionuclides: these are precise values, calculated for a dose of 0.1 mSv, an annual intake of 730 litres and using the dose coefficients laid down in Table A of Annex III to Council Directive 96/29/ Euratom. Derived concentrations for other radionuclides can be calculated on the same basis, and values can be updated on the basis of more recent information recognised by the Secretary of State

(1) <i>Origin</i>	(2) <i>Nuclide</i>	(3) <i>Derived concentration</i>
Natural:	U-238 ⁽ⁱ⁾	3.0 Bq/l
	U-234 ⁽ⁱ⁾	2.8 Bq/l
	Ra-226	0.5 Bq/l
	Ra-228	0.2 Bq/l
	Pb-210	0.2 Bq/l
	Po-210	0.1 Bq/l
Artificial:	C-14	240 Bq/l
	Sr-90	4.9 Bq/l
	Pu-239/Pu-240	0.6 Bq/l
	Am-241	0.7 Bq/l
	Co-60	40 Bq/l
	Cs-134	7.2 Bq/l
	Cs-137	11 Bq/l
	I-131	6.2 Bq/l

⁽ⁱ⁾ This Table allows only for the radiological properties of uranium, not for its chemical toxicity.

Table 2

Performance characteristics and methods of analysis

For the following parameters and radionuclides, the method of analysis used must, as a minimum, be capable of measuring activity concentrations with a limit of detection specified below.

(1) <i>Parameters and radionuclides</i>	(2) <i>Limit of detection (Notes 1, 2)</i>	(3) <i>Notes</i>
Tritium	10 Bq/l	Note 3
Radon	10 Bq/l	Note 3
gross alpha activity	0.04 Bq/l	Note 4
gross beta activity	0.4 Bq/l	Note 4
U-238	0.02 Bq/l	
U-234	0.02 Bq/l	
Ra-226	0.04 Bq/l	
Ra-228	0.02 Bq/l	Note 5
Pb-210	0.02 Bq/l	
Po-210	0.01 Bq/l	
C-14	20 Bq/l	
Sr-90	0.4 Bq/l	
Pu-239/Pu-240	0.04 Bq/l	
Am-241	0.06 Bq/l	
Co-60	0.5 Bq/l	
Cs-134	0.5 Bq/l	
Cs-137	0.5 Bq/l	
I-131	0.5 Bq/l	

Note 1: The limit of detection must be calculated according to the ISO standard 11929: Determination of the characteristic limits (decision threshold, detection limit, and limits of

confidence interval) for measurements of ionising radiation – Fundamentals and application, with probabilities of errors of 1st and 2nd kind of 0.05 each(a).

Note 2: Measurement uncertainties must be calculated and reported as complete standard uncertainties, or as expanded uncertainties with an expansion factor of 1.96 according the ISO Guide for the Expression of Uncertainty in Measurement(b).

Note 3: The limit of detection for tritium and for radon is 10% of its parametric value of 100 Bq/l.

Note 4: The limit of detection for gross alpha activity and gross beta activities are 40% of the screening values of 0.1 and 1.0 Bq/l respectively.

Note 5: This limit of detection applies only to initial screening for ID for a new water source; if initial checking indicates that it is not plausible that Ra-228 exceeds 20% of the derived concentration, the limit of detection may be increased to 0.08 Bq/l for routine Ra-228 nuclide specific measurements, until a subsequent re-check is required.

SCHEDULE 5

Regulation 16

Analytical methodology

Table A1

Parameters for which, subject to regulation 16(7), methods of analysis are prescribed

(1) <i>Parameter</i>	(2) <i>Method</i>
<i>Clostridium perfringens</i> (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 microorganisms	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 ₂ O	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

(a) A copy may be obtained at www.iso.org or from the Drinking Water Inspectorate, Area 7E, 9 Millbank, c/o Nobel House, 17 Smith Square, London, SW1P 3JR.

(b) See previous footnote.

Polymyxine-B sulphate	25.0mg
Indoxyl- μ -D-glucoside to be dissolved in 8ml sterile water before addition	60.0mg
Filter-sterilised 0.5% phenolphthalein diphosphate solution	20.0ml
Filter-sterilised 4.5% FeCl ₃ ·6H ₂ O	2.0ml

Table A2

Parameters in relation to which methods of analysis must satisfy prescribed characteristics

(1) <i>Parameters</i>	(2) <i>Trueness % of prescribed concentration or value or specification</i>	(3) <i>Precision % of prescribed concentration or value or specification</i>	(4) <i>Limit of detection % of prescribed concentration or value or specification</i>
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	25
Fluoride	10	10	10
Iron	10	10	10
Lead	10	10	10
Manganese	10	10	10
Mercury	20	10	20
Nickel	10	10	10
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

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

- (ii) The performance characteristics apply to each individual pesticide and depends 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 6

Regulation 40(1)

Amendments

<i>(1)</i> <i>Regulations to be amended</i>	<i>(2)</i> <i>References</i>	<i>(3)</i> <i>Provisions to be amended</i>	<i>(4)</i> <i>Amendments to be made</i>
The Legislative and Regulatory Reform (Regulatory Functions) Order 2007(a)	S.I. 2007/3544	Part 2 of the Schedule, under the heading "Water"	For "Water Supply (Water Quality) Regulations 2000" substitute "Water Supply (Water Quality) Regulations 2016"
The Water Quality and Supply (Fees) Order 2016	S.I. 2016/303	The Schedule	For "Water Supply (Water Quality) Regulations 2000" substitute "Water Supply (Water Quality) Regulations 2016"

SCHEDULE 7

Regulation 40(2)

Revocations

<i>(1)</i> <i>Regulations revoked</i>	<i>(2)</i> <i>References</i>	<i>(3)</i> <i>Extent of revocation</i>
The 2000 Regulations	S.I. 2000/3184	The whole Regulations
The Water Supply (Water Quality) (Amendment) Regulations 2001(b)	S.I. 2001/2885	The whole Regulations
The National Health Service Reform and Health Care Professions Act 2002 (Supplementary, Consequential etc. Provisions) Regulations 2002(c)	S.I. 2002/2469	Schedule 1 Part 2 paragraph 91
The Water Act 2003 (Consequential and Supplementary Provisions)	S.I. 2005/2035	Regulations 3, 10 and 20

- (a) There are amendments not relevant to these Regulations.
- (b) Amended by S.I. 2007/2734.
- (c) There are amendments not relevant to these Regulations.

Regulations 2005(a) The Water Supply (Water Quality) (Amendment) Regulations 2007(b)	S.I. 2007/2734	The whole Regulations
The Legislative and Regulatory Reform (Regulatory Functions) Order 2007	S.I. 2007/3544	The references in Part 2 of the Schedule, under the heading “Water”, to— (a) the Water Supply (Water Quality) Regulations 2001; and (b) the Water Supply (Water Quality) (Amendment) Regulations 2001
The Water Supply Regulations 2010(c)	S.I. 2010/991	The whole Regulations
The National Treatment Agency (Abolition) and the Health and Social Care Act 2012 (Consequential, Transitional and Savings Provisions) Order 2013(d)	S.I. 2013/235	Paragraph 43 of Schedule 2
The Construction Products Regulations 2013	S.I. 2013/1387	Paragraph 3 of Schedule 5

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations supplement Chapter III of the Water Industry Act 1991 (c.56) (water supply). They also transpose requirements of Council Directive 98/83/EC on the quality of water intended for human consumption (OJ No L 330, 5.12.1998, p 32) and Council Directive 2013/51/Euratom laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption (OJ No L 296, 7.11.2013, p 12). They are primarily concerned with the quality of water supplied in England by water undertakers and licensed water suppliers for domestic or food production purposes and with arrangements for the publication of information about water quality. They revoke and replace the Water Supply (Water Quality) Regulations 2000 (S.I. 2000/3184).

Part 1 of the Regulations sets out preliminary provisions.

Part 2 requires water undertakers to identify annually the areas (“water supply zones”) that are to be relevant for a particular year for the purposes of the application of the provisions of the Regulations.

Part 3 prescribes standards of wholesomeness in respect of water supplied by water undertakers to premises for domestic or food production purposes (referred to in the Regulations as “regulation 4(1) purposes”).

Part 4 provides for the monitoring of water supplies. Regulation 5 defines two monitoring regimes: “audit monitoring” and “check monitoring”. Regulation 6 sets out general monitoring provisions relating to the parameters set out in Schedules 1 (prescribed concentrations and values) and 2 (indicator parameters). Paragraphs (7) to (15) of regulation 6 impose requirements for the

(a) Amended by S.I. 2007/2734.

(b) Amended by S.I. 2013/1387.

(c) Amended by S.I. 2016/573.

(d) There are amendments not relevant to these Regulations.

monitoring of indicative dose, radon and tritium (“radioactive parameters”). In general, these are subject to audit monitoring. For indicative dose, the provisions in Schedule 4 also apply. Regulation 6 also makes provision for monitoring supplies of water from tankers. Regulation 7 requires water undertakers to select at random the points at which samples are to be taken for the purposes of monitoring (referred to as “sampling points”). Regulation 8 provides that the Secretary of State may authorise the taking of samples from points other than sampling points. Regulation 9 deals with the number of samples to be taken. Regulation 10 requires samples to be taken where water undertakers have reason to believe that the quality of the water within their water supply zone has been adversely affected by the presence of certain elements, organisms or substances.

Part 5 contains additional provisions relating to monitoring. Regulations 13 and 14 require samples to be taken in respect of particular organisms and substances, at treatment works and at reservoirs which store treated water. Regulation 15 requires samples to be taken before water is supplied from new sources and from sources which have not recently been used. Regulation 16 prescribes requirements relating to the taking, handling, storage, transport and analysis of samples.

Part 6 requires water undertakers and combined licensees to identify every point from which it abstracts water for supply for regulation 4(1) purposes and to take samples from those points to comply with regulations 26 to 28. This implements Article 8(1) and (2) of Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy (OJ No L 327, 22.12.2000, p 1).

Part 7 requires water undertakers and combined licensees to investigate the cause of any failure, or apprehended failure, of any parameters set out in Schedule 1 or any indicator parameters set out in Schedule 2 and to notify the Secretary of State. Where the failure is attributable to a domestic distribution system or the maintenance of that system, notification must be provided to the consumers of the affected water supply and to any other relevant supplier. Regulations 20 and 21 provide for actions that may be taken by the Secretary of State upon receipt of a notification under regulation 18 or 19. Where a failure relates to a parameter in Table B in Schedule 1, and certain other conditions are met, the Secretary of State may require the supplier to apply for an authorisation for a departure from the requirements of Part 3 of the Regulations. The circumstances in which authorisations may be granted and the conditions to which they are subject are set out in regulations 22 and 23. Provision is made in regulation 24 for publicising authorisations. Regulation 25 provides for the revocation and variation of authorisations.

Part 8 deals with the treatment of water and regulates the substances, processes and products that may be used by water undertakers in connection with the supply of water. Regulation 26 imposes requirements relating to the disinfection and treatment of water. Regulation 27 provides for the carrying out of risk assessments and subsequent reviews. Regulation 28 requires water undertakers and combined licensees to submit reports of risk assessments and reviews to the Secretary of State. Paragraph (4) of regulation 28 sets out the steps that the Secretary of State may take on receipt of a report which states there is or has been a significant risk of supplying water that could constitute a potential danger to human health or could be unwholesome. Regulation 29 requires water undertakers and combined licensees to treat water to minimise the risk of copper and lead contamination from pipes. Regulation 30 sets out provisions relating to the replacement or modification of lead pipes. Regulation 31 specifies the circumstances in which water undertakers and combined licensees may apply or introduce substances or products into water supplied for regulation 4(1) purposes. Regulation 32 enables the Secretary of State to require approval of the use of any process in connection with the supply of water for regulation 4(1) purposes. Under regulation 33, contravention of specified requirements of regulations 26, 28, 31 and 32 are criminal offences, as is the making of false statements.

Part 9 deals with the maintenance of records and provision of information by water undertakers, combined licensees and retail licensees.

Part 10 imposes requirements on local authorities in the performance of their duties in relation to the quality of water supplied by water undertakers or licensed water suppliers in areas which are situated in the area of the local authority.

Part 11 provides that contraventions by any relevant supplier of duties or requirements imposed by Parts 4 to 9 of the Regulations are enforceable under section 18 of the Water Industry Act 1991 by the Secretary of State or the Water Services Regulation Authority (known as Ofwat). This provision is in addition to the criminal sanctions provided by regulation 33.

Part 12 provides for review of the Regulations by the Secretary of State.

Part 13 provides for amendments and revocations as set out in Schedules 6 and 7.

Schedules 1 and 2 set out the parameters applicable to the Regulations. Schedule 3 sets out provisions applicable to monitoring for those parameters, as provided for in regulation 6. Schedule 4 sets out provisions for monitoring for indicative dose and analytical performance characteristics as provided for in regulation 6. Schedule 5 sets out the analytical methodology as provided for in regulation 16.

A validation impact assessment of the effect that this instrument will have on the costs of business, the voluntary sector and the public sector is available from the Water Services Team, the Department for Environment, Food and Rural Affairs, Area 3D, Nobel House, 17 Smith Square, London SW1P 3JR. A transposition note is submitted with the Explanatory Memorandum which is available alongside the instrument on www.legislation.gov.uk.

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