
STATUTORY INSTRUMENTS

2016 No. 614

The Water Supply (Water Quality) Regulations 2016

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⁽¹⁾, 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);
- (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—

(1) 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).

- (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.