SCHEDULE 4

Sampling and Analysis

PART 1

General

Authorisation of alternative methods of analysis

3.—(1) If the Department is satisfied that an alternative method of analysis is at least as reliable as a method of analysis prescribed by paragraph 2(2), it may authorise its use instead of the prescribed method.

(2) The Department shall provide the European Commission with relevant information concerning such methods authorised in paragraph 3(1) and their equivalence.

(3) Until 31 December 2019 the Department may use "trueness", "precision" and "limit of detection" as specified in Table C in Part 2 of this Schedule ("Table C") as alternative sets of performance characteristics to "limit of quantification" and "uncertainty of measurement" specified in paragraph 6 and Table B of this Schedule.

(4) For the purposes of this paragraph the method of analysis for each parameter specified in the first column of Table C must be capable of—

(a) measuring concentrations and values with the trueness and precision specified in the second and third columns of that table; and

(b) detecting the parameter at the limit of detection specified in the fourth column of that table.

(5) For hydrogen ion, a method of analysis must be capable at the time of use of measuring a value with a trueness of 0.2 pH unit and a precision of 0.2 pH unit.

(6) For these purposes—

"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; and

"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) In the absence of an analytical method meeting the minimum performance criteria set out in sub-paragraph (3) and paragraph 2(3) the Department must ensure that monitoring is carried out using best available techniques not entailing excessive costs.