1994 No. 221

WATER AND SEWERAGE

The Water Quality Regulations (Northern Ireland) 1994

Made	*17th June 1994*
Coming into operation . .	*1st October 1994*

ARRANGEMENT OF REGULATIONS

PART I

GENERAL

1. Citation and commencement
2. Interpretation

PART II

REQUIREMENTS FOR WHOLESOMENESS

3. Requirements for wholesomeness

PART III

RELAXATION OF REQUIREMENTS OF PART II

4. Authorisations by the Department of relaxations
5. Restrictions on authorisations by the Department of relaxations
6. Conditions of authorisations by the Department of relaxations
7. Revocation and modification by the Department of authorisations
8. Authorisations — private supplies

PART IV

MONITORING OF WATER SUPPLIES

9. Application and interpretation
10. Monitoring — general provisions
11. Determination of sampling points
12. Authorisation of supply points
13. Frequency of sampling
14. Sampling — further provisions

PART V

MONITORING — ADDITIONAL PROVISIONS

15. Interpretation
16. Sampling for particular parameters
17. Sampling at treatment works
18. Sampling at service reservoirs
19. Sampling — new and stand-by sources
20. Collection and analysis of samples

PART VI

WATER TREATMENT

21. Interpretation
22. Treatment of raw water
23. Contamination from pipes
24. Application and introduction of substances and products
25. Use of processes

PART VII

RECORDS AND INFORMATION

26. Maintenance of records
27. Provision of information as to records, etc.
28. Publication of information
29. Offences

SCHEDULES

1. Prescribed concentrations or values (Tables A–E)
2. Sampling frequencies

Tables 1 to 4 and 6: Sampling frequencies at consumers' taps
Table 5: Sampling frequencies at supply points
Table 7: Sampling frequencies for treatment works

The Department of the Environment, in exercise of the powers conferred upon it by Articles 2, 3A, 3B and 3C of the Water and Sewerage Services (Northern Ireland) Order 1973(**a**), and of every other power enabling it in that behalf, hereby makes the following regulations:

(**a**) S.I. 1973/70 (N.I. 2) as amended by the Water and Sewerage Services (Amendment) (Northern Ireland) Order 1993 (S.I. 1993/3165 (N.I. 16)) Art. 4; Art. 2 is cited because it contains a definition of "prescribed"

PART I

GENERAL

Citation and commencement

1. These regulations may be cited as the Water Quality Regulations (Northern Ireland) 1994 and shall come into operation on 1st October 1994.

Interpretation

2.—(1) In these regulations—

"the Order" means the Water and Sewerage Services (Northern Ireland) Order 1973;

"consumer" means a person to whom water is supplied by the Department in discharge of its duties under Article 3A(a) of the Order;

"the Department" means the Department of the Environment;

"disinfected" means subjected to a process which removes or renders inactive pathogenic micro-organisms so as to satisfy the requirements of Part II, in respect of the parameters listed in Table C; and cognate expressions (with the exception of the term "residual disinfectant") shall be construed accordingly;

"ground water" means any water contained in underground strata, or in

(i) a well, borehole or similar work sunk into underground strata, including any adit or passage constructed in connection with the well, borehole or work for facilitating the collection of water in the well, borehole, or work, or,

(ii) any excavation into underground strata where the level of water in the excavation depends wholly or mainly on water entering it from the strata;

"parameter" means a property, element, organism or substance listed in the second column of the Tables in Schedule 1 or in the first column of Tables 1 to 4, 6 and 7 in Schedule 2;

"pesticides and related products" means any fungicide, herbicide or insecticide and polychlorinated biphenyls and terphenyls;

"prescribed concentration or value", in relation to any parameter, means the maximum or minimum concentration or value specified in relation to that parameter in the Tables in Schedule 1 as measured by reference to the unit of measurement so specified;

"sampling point" means the point, being a consumer's tap, that is determined for the purposes of Part IV;

"service reservoir" means a reservoir (including a water tower) which contains water that has been treated with a view to complying with regulation 22, but does not include a reservoir at a treatment works;

(a) Art. 3A was inserted by Art. 4(2) of S.I. 1993/3165 (N.I. 16)

"supply point" means any point, not being a sampling point, from which the Department authorises samples to be taken in accordance with regulation 12, for the purposes of regulation 10;

"underground strata" has the same meaning as in section 30 of the Water Act (Northern Ireland) 1972(**a**);

"water supply zone" means an area that is designated by the Department for the purposes of these regulations, being an area in which, in the Department's estimation, not more than 50,000 people reside and in which all the premises supplied with water for domestic or food production purposes are normally supplied from the same source or combination of sources;

"year" means calendar year.

(2) Any reference in these regulations to a Table followed by a letter or number is a reference to the Table that bears that letter or number in Schedule 1 or 2.

(3) In these regulations the abbreviations listed in the following Table are used—

"mg/l"	—	milligrammes per litre;
"ng/l"	—	nanogrammes per litre;
"µg/l"	—	microgrammes per litre;
"µS/cm	—	microsiemens per centimetre;
"Pt/Co scale"	—	platinum cobalt scale;
"PCV"	—	prescribed concentration or value; and
"m^3/d"	—	cubic metres per day.

PART II

REQUIREMENTS FOR WHOLESOMENESS

Requirements for wholesomeness

3.—(1) This regulation has effect subject to Part III.

(2) Subject to paragraph (7), water supplied to any premises for domestic or food production purposes shall be regarded as wholesome for the purposes of Part II of the Order—

(*a*) if the requirements of paragraph (3) are satisfied; and

(*b*) where the water has been softened or desalinated and is to be supplied for drinking, cooking or food production purposes, the requirements of paragraph (4) are also satisfied.

(3) The requirements of this paragraph are—

(*a*) that the water does not contain any element, organism or substance (other than a parameter) at a concentration or value which would be detrimental to public health;

(**a**) 1972 c. 5 (N.I.)

(*b*) that the water does not contain any element, organism or substance (whether or not a parameter) at a concentration or value which, in conjunction with any other element, organism or substance it contains (whether or not a parameter), would be detrimental to public health;

(*c*) subject to paragraphs (5) to (8), that the water does not contain concentrations or values of the parameters listed in Tables A to C in excess of the prescribed concentrations or values;

(*d*) that samples taken in respect of the parameters listed in Table D from water supplied to the water supply zone in question have established that the average concentrations or values of those parameters over the preceding 12 months did not exceed those specified in that Table; and

(*e*) that samples taken from water supplied to the water supply zone in question have established that the average concentrations over the 3 preceding months of trihalomethanes (being the aggregate of the concentrations of trichloromethane, dichlorobromomethane, dibromochloromethane and tribromomethane) did not exceed 100 μg/l or where (by virtue of regulation 13(4)) less than 4 samples are taken in any year, no sample contained a concentration of trihalomethanes in excess of 100μg/l.

(4) The requirements of this paragraph are that the water's hardness or its alkalinity is not below the relevant minimum specified in Table E.

(5) Water shall not be regarded as unwholesome by virtue of paragraph (3)(*c*) by reason of a sodium concentration exceeding that specified in relation to item 9 in Table A (sodium) if 80% of the results of analysis of all the samples, taken in accordance with these regulations within the preceding 36 months from sampling points within the water supply zone in question, demonstrate a concentration of sodium within the relevant maximum specified in that Table.

(6) Water shall not be regarded as unwholesome by virtue of paragraph (3)(*c*) by reason of the presence in it of any total coliforms (item 1 of Table C)—

(*a*) in a case where 50 or more samples have been taken in accordance with these regulations within the preceding 12 months from sampling points within the water supply zone in question, if the results of analysis of all those samples establish that in 95% of those samples coliforms were absent; or

(*b*) in a case where less than 50 samples have been so taken within the preceding 12 months, if the results of analysis of the last 50 samples so taken establish that in 48 of those samples coliforms were absent.

(7) Subject to paragraph (8), water supplied to any premises for domestic or food production purposes shall be regarded as unwholesome, if, on transfer from a treatment works or service reservoir for supply for such purposes, it contains a concentration of any of the parameters listed in Table C in excess of the prescribed concentration.

(8) Water transferred from a service reservoir for supply for the purposes mentioned in paragraph (7) shall not be regarded as unwholesome by reason of the presence in it of any coliforms (item 1 of Table C) if the results of

analysis of every sample, taken in accordance with these regulations in each week in which the reservoir in question is in use in the preceding 12 months, establish that in 95% of those samples coliforms were absent.

PART III

RELAXATION OF REQUIREMENTS OF PART II

Authorisations by the Department of relaxations

4. The Department may authorise a relaxation of the requirements of Part II as respects the wholesomeness of the supply of water by the Department if it is satisfied—

(*a*) that the authorisation is necessary, as an emergency measure, to maintain a supply of water for human consumption;

(*b*) that the authorisation is called for by reason of exceptional meteorological conditions;

(*c*) that the authorisation is called for by reason of the nature and structure of the ground in the area from which the supply emanates; or

(*d*) that the supply is or is to be used solely for food production purposes.

Restrictions on authorisations by the Department of relaxations

5.—(1) An authorisation—

(*a*) granted under regulation 4(*a*) shall not so relax the requirements of Part II as to give rise to a risk to public health which the Department after consultation with the Chief Medical Officer of the Department of Health and Social Services considers unacceptable;

(*b*) granted under regulation 4(*b*) or (*c*) shall not relax the requirements of Part II so far as they relate to parameters mentioned in Table B or C or item 7 of Table D, or so as to give rise to a public health hazard;

(*c*) granted under regulation 4(*d*) shall not relax the requirements of the said Part II so as to affect the fitness for consumption of the food or drink in its final form.

(2) An authorisation granted under regulation 4 shall specify (where relevant) the extent to which the prescribed concentration or value of any parameter is authorised to be contravened.

(3) An authorisation granted under regulation 4(*a*) or (*b*) shall specify the date on which it ceases to have effect and an authorisation under regulation 4(*c*) or (*d*) may specify such a date.

Conditions of authorisations by the Department of relaxations

6.—(1) An authorisation granted under regulation 4 may be limited to water supplied—

(*a*) from particular sources or classes of source;

(*b*) to particular water supply zones or parts of such zones or to zones of particular descriptions; or

(*c*) for a particular food production purpose.

(2) An authorisation granted under regulation 4 may also include conditions relating to—

(*a*) the quality of water to which the authorisation applies;

(*b*) the steps to be taken to improve the quality of such water;

(*c*) the monitoring of the quality of such water; and

(*d*) the giving of notice to any person or body named in the authorisation of such matters concerning such water as are mentioned in the authorisation.

Revocation and modification by the Department of authorisations

7.—(1) Subject to paragraph (2), the Department may at any time modify or revoke an authorisation or modify or revoke conditions of the authorisation (whether or not the authorisation is expressed to be granted for a specified period); and regulation 6 shall apply as respects the modification of an authorisation or modification of conditions of the authorisation as it applies as respects the granting of an authorisation.

(2) The Department shall revoke the authorisation as soon as the circumstances which gave rise to the authorisation cease to exist.

Authorisations — private supplies

8.—(1) Regulations 4, 5, 6(1)(*c*), 6(2) and 7 shall apply in relation to any private supply as if in regulation 4 there were substituted for the words "the supply of water by the Department" the words "a private supply".

(2) Subject to paragraph (3), the Department may upon the written application of any person mentioned in paragraph (4) authorise a relaxation of the requirements of Part II as respects a private supply.

(3) The Department may in the circumstances mentioned in regulation 4(*c*) authorise a relaxation of the requirements of Part II as respects a private supply notwithstanding that no application for such authorisation has been made to it.

(4) The persons referred to in paragraph (2) are—

(*a*) the owner or occupier of the premises where the source of the private supply is situated;

(*b*) any other person who exercises powers of management or control in relation to that source; or

(*c*) the owner of any premises served by that supply.

(5) In cases where the application under paragraph (2) is made by the owner of the premises served by a private supply a copy of the application shall be served on one of the persons mentioned in paragraphs (4)(*a*) and (*b*).

PART IV

MONITORING OF WATER SUPPLIES

Application and interpretation

9.—(1) This Part applies to water supplied by the Department for domestic or food production purposes.

(2) In this Part—

"corresponding number" means any relevant reduced or increased number shown in a Table as an alternative to the standard number; and

"the standard number" means such number specified in the column headed "Standard" in Tables 1 to 6 as is applicable to the parameter in question by reference to the number of persons estimated to have been supplied from the relevant water supply zone during the year preceding the year in question or, as the Department may determine, by reference to the volume of water supplied for domestic purposes and, if water is supplied for food production purposes, for those purposes from that zone during that period; but a determination may not be varied after the beginning of the year for which it applies.

Monitoring — general provisions

10. For the purpose of determining whether water to which this Part applies satisfies the requirements of Part II or, as the case may be, those requirements as relaxed by an authorisation given under Part III, the Department shall take and analyse or cause to be analysed such number of samples as is specified in this Part of the water within each of its water supply zones.

Determination of sampling points

11.—(1) Subject to paragraph (2), the Department shall determine, in respect of each of its water supply zones, such number and location of sampling points as will, in its opinion, secure that analysis of samples obtained from those points in respect of the parameters listed in Tables A to E will, so far as is reasonably practicable, produce data which are representative of the quality of the water supplied by it to that zone.

(2) The sampling points selected in respect of copper, lead and zinc and at least 50% of the sampling points selected in respect of parameters 1, 2 and 5 listed in Table C and in respect of residual disinfectant shall be selected at random.

Authorisation of supply points

12.—(1) Subject to paragraphs (2) to (4), the Department may, in relation to any of the parameters listed as items 7 to 12, 18 to 20 and 26 to 28 in Table A, items 1 to 6 and 8 to 10 in Table B, items 1 to 6 and 8 to 10 in Table D, and items 1 and 2 in Table E, or trihalomethanes, authorise the use for the purposes of regulation 10 of samples taken for a water supply zone otherwise than from a sampling point.

(2) The Department shall exercise its power under paragraph (1) only if it is satisfied that analysis of samples taken for a water supply zone 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 significant respect from the data that would be produced in respect of that parameter from analysis of samples obtained from sampling points within that zone.

(3) The Department may at any time modify or revoke an authorisation granted under paragraph (1).

(4) The Department shall revoke the authorisation as soon as the circumstances which gave rise to the authorisation cease to exist.

Frequency of sampling

13.—(1) Subject to paragraphs (2) to (12), in each year the Department shall take from its sampling points, or, as the case may be, its supply points, for analysis for testing for compliance with each parameter not less than such standard number of samples as is specified in Tables 1 to 6 in relation to the parameter in question.

(2) In the period from 1st October 1994 to 31st December 1994, the number of samples taken shall be not less than one quarter of the standard number of samples so specified, which number shall be rounded upwards, if necessary, to the nearest whole number.

(3) For the purposes of the application of paragraphs (4) and (5) to the parameters listed in Table 1 or 2 or referred to in Table 5, a supply which consists of both ground water and surface water shall be deemed to be a supply which consists only of surface water.

(4) Subject to paragraph (5), where in each of 3 successive years the requirement mentioned in paragraph (6) is satisfied in relation to a parameter listed in Table 1, 2 or 3 or referred to in Table 5 and the Department is of the opinion that the concentration or value in respect of that parameter is unlikely to increase or, in the case of hydrogen ion, total hardness or alkalinity, decrease to any significant extent in the next following year, the number of samples to be taken in that year in respect of that parameter may be the reduced corresponding number.

(5) Paragraph (4) shall apply in order to determine the number of samples to be taken in 1995, 1996 and 1997 with the modifications specified in paragraph (8).

(6) The requirement referred to in paragraph (4) is that analysis of each sample taken in relation to the parameter in question in accordance with paragraph (1) or (2), as the case may be, has established—

(*a*) in the case of hydrogen ion, a pH value that is not less than 6.5 and no more than 8.5;

(*b*) in the case of total hardness or alkalinity (where water has been softened or desalinated), a concentration that is no less than 90 mg Ca/l or 45 mg HCO_3/l, respectively; or

(*c*) in any other case, a concentration or value which is less than 50% of the prescribed concentration or value.

(7) Where in accordance with paragraph (4), the number of samples to be taken in any year in respect of the conductivity or hydrogen ion parameters listed in Table 1 may be the reduced corresponding number, the number of samples to be taken in that year in respect of the qualitative odour and qualitative taste parameters may be similarly reduced.

(8) Paragraph (4) shall apply in order to determine the number of samples to be taken—

(*a*) in 1995 as if it referred to the period from 1st October 1994 to 31st December 1994 instead of 3 successive years;

(*b*) in 1996 as if it referred to the period from 1st October 1994 to 31st December 1995 instead of 3 successive years;

(*c*) in 1997 as if it referred to the period from 1st October 1994 to 31st December 1996 instead of 3 successive years.

(9) Where—

(*a*) the result of the analysis of any sample taken in accordance with paragraph (1) or (2), as the case may be, has established in relation to any parameter listed in Tables 1 to 5 that the prescribed concentration or value has been contravened; or

(*b*) as a consequence of either any change in the Department's practices as regards the treatment of water (whether at a service reservoir, treatment works or otherwise), or of any other change, the Department is of the opinion that the prescribed concentration or value in respect of any parameter has been or may be contravened,

the number of samples to be taken in respect of that parameter—

(i) in the remainder of that year and the following year; or

(ii) in such longer or shorter period as the Department may consider necessary,

shall, where an increased corresponding number is shown in relation to that parameter, be the number determined in accordance with paragraph (10).

(10) The number determined for the purposes of paragraph (9) is—

(*a*) for any whole year in the period the increased corresponding number; or

(*b*) for any other part of the period the increased corresponding number multiplied by the number of whole months in that part and divided by 12; and, where the result is not a whole number, rounded upwards to the nearest whole number.

(11) Where an analysis of samples taken in accordance with paragraph (9) demonstrates that there has been no contravention of the prescribed concentration or value in the relevant period, the Department may revert to sampling in accordance with paragraph (1).

(12) Where the sampling frequency specified in relation to any parameter in Tables 1 to 6 is—

(*a*) 1 per annum, not less than 3 months shall elapse between the taking of successive samples;

(*b*) more than 1 per annum, samples shall be taken at regular intervals.

Sampling — further provisions

14.—(1) Where no standard number is specified in relation to a parameter listed in Schedule 1 the Department shall take sufficient samples from water within a water supply zone in respect of that parameter in order to establish whether or not the water is wholesome as soon as it believes or has reasonable grounds for believing that—

(*a*) the prescribed concentration or value in respect of that parameter has been exceeded or may be exceeded within the next 3 months within that zone; or

(*b*) the prescribed concentration or value in respect of any other parameter has been exceeded or may be exceeded within the next 3 months within that zone; and the taking and analysis of samples in relation to the parameter first mentioned would assist in deciding whether, and, if so, what remedial action should be taken.

(2) The Department shall take sufficient samples from water within a water supply zone in respect of any element, organism or substance, other than a parameter, in order to establish whether or not the water is detrimental to public health as soon as it believes or has reasonable grounds for believing that that element, organism or substance, whether alone or in combination with a parameter or any other element, organism or substance, may cause the supply within that zone to be a supply which does not satisfy the requirements of Part II or, where those requirements have been relaxed by an authorisation under Part III, of those requirements as so relaxed.

PART V

MONITORING — ADDITIONAL PROVISIONS

Interpretation

15. In this Part—

"the standard number" means such number specified in the column headed "Standard" in Table 7 as is applicable to the parameter in question by reference to the volume of water supplied for domestic purposes and, if water is supplied for food production purposes, for those purposes from the relevant water supply zone during the preceding year; and

"reduced number" means the relevant reduced number (if any) shown in Table 7.

Sampling for particular parameters

16. For the purpose of establishing the quality of water to be supplied to any of its water supply zones, the Department shall take and analyse or cause to be analysed, such number of samples as is specified in this Part.

Sampling at treatment works

17.—(1) Subject to paragraphs (2) to (4) and (7), in each year the Department shall take, from the point at which water leaves each treatment

works which serves its water supply zones, for analysis for testing for compliance with the parameters mentioned in Table 7, not less than the standard number of samples.

(2) In the period from 1st October 1994 to 31st December 1994, the number of samples taken shall be not less than one quarter of the standard number, which number shall be rounded upwards, if necessary, to the nearest whole number.

(3) Subject to paragraph (4), where in each of 3 successive years the result of the analysis of the samples taken in accordance with paragraph (1) has established an absence of faecal and total coliforms and no significant increase in colony counts, the number of samples to be taken in the next following year from the point at which water leaves that works in respect of those parameters or that parameter, as the case may be, may, subject to paragraph (6), be the reduced number.

(4) Paragraph (3) shall apply in order to determine the number of samples to be taken in 1995, 1996 and 1997 with the modifications specified in paragraph (5).

(5) Paragraph (3) shall apply in order to determine the number of samples to be taken—

(*a*) in 1995 as if it referred to the period from 1st October 1994 to 31st December 1994 instead of 3 successive years;

(*b*) in 1996 as if it referred to the period from 1st October 1994 to 31st December 1995 instead of 3 successive years;

(*c*) in 1997 as if it referred to the period from 1st October 1994 to 31st December 1996 instead of 3 successive years; and

(*d*) in each of those years with the substitution of "paragraphs (1) and (2)" for "paragraph (1)".

(6) A reduced number of samples may be taken in accordance with paragraph (3) in respect of works supplying for domestic or food production purposes an average volume of more than 2,000 m^3/d of water only if the Department is of the opinion that there is no foreseeable risk that faecal or total coliforms will be present in the supply, or the works are so designed that a failure of the disinfection process will automatically bring about a cessation of the supply.

(7) Samples in respect of any parameter in Table 7 shall be taken at regular intervals.

Sampling at service reservoirs

18. The Department shall take from each of its service reservoirs at least one sample for analysis for testing for compliance with each of the parameters listed in Table 7 in each week in which the reservoir is in use.

Sampling — new and stand-by sources

19.—(1) This regulation applies as respects—

(*a*) any source which has not been used for the supply of water by the Department at any time since 15th July 1985; and

(*b*) any source which has been so used but not so used for a period of 6 months preceding the date on which the Department proposes to supply water from it.

(2) The Department shall—

(*a*) before it supplies water from a source mentioned in paragraph (1)(*a*); and

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

take in accordance with paragraph (3) such samples of that water as will enable it to establish—

(i) whether water can be supplied from that source without contravening Article 3A(1) of the Order; and

(ii) the treatment necessary to ensure that Article 3A(1) is complied with in relation to the supply of that water.

(3) Samples shall be taken—

(*a*) in the case of a source mentioned in paragraph (1)(*a*), in respect of—

(i) each of the parameters listed in Schedule 1; and

(ii) any other element, organism or substance which, in the opinion of the Department, may cause the supply to contravene Article 3A(1) of the Order; or

(*b*) in the case of a source mentioned in paragraph (1)(*b*), in respect of—

(i) the parameters listed in Table C;

(ii) any parameter by reference to which an assessment may be made of the balance of ions within the water; and

(iii) any other parameter whose concentration or value may, in the opinion of the Department, have altered since the last occasion on which water from that source was analysed.

Collection and analysis of samples

20.—(1) The Department shall secure, so far as is reasonably practicable, that in taking, handling, transporting, storing and analysing or causing to be analysed any sample taken for the purposes of Parts IV and V, the appropriate requirements are satisfied.

(2) In paragraph (1) "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 temperature and in such conditions as will 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 may be after it has been taken—

(i) by or under the supervision of a person who is competent to perform that task;

(ii) with the use of such equipment as is suitable for the purpose;

(iii) by applying such analytical systems and methods as are capable of establishing, within acceptable limits of deviation and detection, whether the sample contains concentrations or values which contravene the prescribed concentrations or values; and

(*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 either the laboratory or the Department; and

(ii) approved by the Department for that purpose.

PART VI

WATER TREATMENT

Interpretation

21. In this Part—

"pipe" does not include any water fittings as defined in Article 2 of the Order; and

"raw water" means untreated water;

"surface water" includes any river, stream, watercourse or inland water (whether natural or artificial) but does not include water from a spring.

Treatment of raw water

22.—(1) Subject to paragraph (2), in carrying out such of its functions under Part II of the Order as comprise the supply of water for domestic or food production purposes, the Department shall not supply water from any source which consists of or includes raw water unless the water has been disinfected and, in the case of surface water, subjected to at least such further treatment as is specified in paragraph (3).

(2) The Department shall not be required to disinfect water from any ground water source where after taking water samples it is satisfied there can be no resultant danger to public health.

(3) The further treatment mentioned in paragraph (1) is such treatment as is required to secure compliance with Council Directive 75/440/EEC (quality required of surface water intended for the abstraction of drinking water)(**a**); and for the purposes of this regulation, surface water shall be treated as falling within category A1 or A2 or A3 set out in Annex 1 to that Directive if it is abstracted from waters which satisfy the criteria prescribed in any regulations made under section 4B(1) of the Water Act (Northern Ireland) 1972(**b**).

(**a**) O.J. No. L194, 25.7.1975, p. 26

(**b**) 1972 c. 5 (N.I.) as amended by the Water and Sewerage Services (Amendment) (Northern Ireland) Order 1993 (S.I. 1993/3165 (N.I. 16))

(4) Until such time as a notice under section 4C(1) of the Water Act (Northern Ireland) 1972 is published in relation to any waters, those waters shall for the purposes of this regulation be treated as falling within the category A1 or A2 or A3 if the waters were classified as being of that category by the Department before these regulations come into operation.

Contamination from pipes

23.—(1) Where there is a risk ("the prescribed risk") that water supplied by the Department would, for the reason mentioned in paragraph (2), cease to comply with the requirements of Part II after leaving the Department's pipes, the Department shall, subject to paragraphs (4) and (5)—

(*a*) treat the water in such a way as will, in its opinion, eliminate the prescribed risk or reduce it to a minimum; and

(*b*) where the risk relates to lead, remove the Department's part of any pipe to which this sub-paragraph applies when such part of the remainder of that pipe as is used for the supply of water for food production purposes, or connects directly to a tap used for the supply of drinking water, is removed.

(2) The reason referred to in paragraph (1) is the presence in the water of a concentration of copper, lead or zinc which exceeds the prescribed concentration and which is attributable to the fact that—

(*a*) copper or lead is the major component; or

(*b*) zinc is a component,

of such a pipe as is mentioned in Article 3A(3)(*a*) of the Order(**a**).

(3) Paragraph (1)(*b*) applies to a lead pipe which is subject to water pressure from a main or would be so subject but for the closing of some valve and which belongs, as to part, to the Department and, as to the remainder, to the owner of any premises to which the Department supplies water for domestic or food production purposes.

(4) Paragraph (1) shall not require the Department to treat water—

(*a*) if the treatment is unlikely, in its opinion, to achieve a significant reduction in the concentration of copper, lead or zinc, as the case may be; or

(*b*) in any water supply zone where the prescribed risk relates only to water supplied in an insignificant part of the zone; or

(*c*) if treatment is not reasonably practicable.

(5) Paragraph (1) shall not require the Department to remove a pipe unless it has received a request in writing to do so from the owner of the premises in question.

Application and introduction of substances and products

24. The Department shall not, otherwise than for the purposes of testing or research, apply any substance or product to, or introduce any substance or

(**a**) S.I. 1973/70 (N.I. 2) as amended by the Water and Sewerage Services (Amendment) (Northern Ireland) Order 1993 (S.I. 1993/3165 (N.I. 16)).

product into, water which is to be supplied for domestic or food production purposes unless—

(*a*) the Department is satisfied that the substance or product either alone or in combination with any other substance or product in the water is unlikely to affect adversely the quality of the water supplied; or

(*b*) the substance or product—

(i) was at any time before the commencement of these regulations listed in the 15th Statement of the Committee on Chemicals and Materials of Construction for Use in Public Water Supply and Swimming Pools(**a**) or in any supplement to that Statement issued before the making of these regulations;

(ii) is applied or introduced in accordance with any conditions referred to in that Statement or any supplement so issued; or

(iii) was approved by the Secretary of State under regulation 25(1)(*a*) of the Water Supply (Water Quality) Regulations 1989(**b**).

Use of processes

25.—(1) Subject to paragraph (2), the Department may make use of any process in connection with the supply of water for domestic or food production purposes provided it is satisfied that the process will not affect adversely the quality of water supplied.

(2) The Department may prohibit, restrict or impose conditions on any such use and may revoke any restriction or modify or revoke any condition imposed under this paragraph.

PART VII

RECORDS AND INFORMATION

Maintenance of records

26.—(1) The Department shall prepare and maintain, in respect of each of its water supply zones, a record containing—

(*a*) the name of the zone;

(*b*) if not comprised in the name of the zone, the name or names of any water treatment works from which water is supplied to premises within the zone;

(*c*) an estimate of the population of the zone;

(*d*) particulars of any relaxation authorised under Part III which applies to water supplied in the zone;

(*e*) particulars of any action taken or required to be taken by it to comply with its duties under Article 3A of the Order so far as they relate to the zone;

(**a**) The 15th Statement was issued in March 1989 and a supplement to it issued on 6th July 1989

(**b**) S.I. 1989/1147 as amended by S.I. 1989/1384 and S.I. 1991/1837. (A List of Substances, Products and Processes Approved under Regulations 25 and 26 for Use in Connection with the Supply of Water for Drinking, Washing, Cooking or Food Production Purposes was issued in December 1993)

(*f*) particulars of the result of any analysis of samples taken in accordance with Part IV or regulations 15 to 18;

(*g*) information supplied to district councils under regulation 27(3); and

(*h*) such other particulars as the Department considers appropriate.

(2) The Department shall make—

(*a*) initial entries in the record in respect of the matters mentioned in paragraph (1)(*a*) to (*e*) before 1st October 1994;

(*b*) entries relating to the results of the analysis of samples within 28 days from the day on which the result is first known to the Department; and

(*c*) an entry of the information mentioned in paragraph (1)(*g*) when regulation 27(3) is complied with.

(3) Without prejudice to paragraph (2), the Department shall at least once in each year review the record and bring it up to date.

(4) The Department need not retain a record of any information mentioned in paragraph (1)(*f*) or (*g*) at any time more than 5 years after the date on which the information was first entered in the record.

Provision of information as to records, etc.

27.—(1) The Department shall make available for inspection by the public at all reasonable hours at such of its Water Executive Divisional Headquarter offices as are normally open to the public any record maintained under regulation 26, in relation to the quality of water.

(2) The Department shall provide to any person, on request, a copy of any part of a record maintained under regulation 26 in relation to the quality of water on payment of such charge as the Department may determine.

(3) Subject to paragraph (4), the Department shall, not later than 30th June in each year, commencing with the year 1996, supply to each district council information relating to the preceding year concerning the quality of water supplied to premises in that council's area, including so far as the information is relevant to the council's area—

(*a*) a summary of the samples taken in respect of each parameter;

(*b*) the extent to which the Department has complied with the requirements of Parts II and IV; and

(*c*) the action taken by the Department to comply with its duties under Article 3A of the Order.

(4) The information required to be supplied before 30th June 1996 shall cover the 15 month period ending 31st December 1995.

(5) The Department shall notify a district council and a health and social services board as soon as may be after the occurrence of any event which, by reason of its effect or likely effect on the water supplied by it, gives rise or is likely to give rise to a significant risk to the health of persons residing in the area of that council or board.

(6) A council or board who have received a notification under paragraph (5) may require the Department to provide them with such information relating to the event and its consequences as they may reasonably require.

(7) In this Part "health and social services board" means a board established under Part III of the Health and Personal Social Services (Northern Ireland) Order 1972(**a**).

Publication of information

28.—(1) The Department shall publish information for the period from 1st October 1994 to 31st December 1995 and for each year thereafter in the form of a report which shall contain—

(*a*) a summary of the quality of water supplied by it for domestic and, if water is supplied for food production purposes, for those purposes;

(*b*) a statement as to the extent to which water supplied by it complied with Part II;

(*c*) particulars of any relaxation authorised under Part III which applies to water supplied by it;

(*d*) a statement of the action that it has taken or is required to take and has not yet taken to comply with its duties under Article 3A of the Order;

(*e*) a statement that a person may inspect any record maintained in accordance with regulation 26 and particulars of the times and places at which such inspection may be made; and

(*f*) such other information as the Department considers appropriate.

(2) The statement required by paragraph (1)(*b*) shall specify the microbiological and physio-chemical quality of water supplied by the Department and the number of the results of the analysis of samples which established a concentration or value in respect of any parameter which contravened the prescribed concentration or value.

(3) On or before 30th June the Department shall publish a report in accordance with paragraph (1) and shall at the same time send a copy to every district council, every health and social services board, the Department of Health and Social Services, the Department of Agriculture, the Northern Ireland Water Council and the General Consumer Council for Northern Ireland.

Offences

29.—(1) Any person who wilfully or negligently uses, in connection with the preparation of water for domestic or food production purposes, a process, substance or product in contravention of regulation 24 or 25, shall be guilty of an offence and shall be liable—

(*a*) on summary conviction, to a fine not exceeding the statutory maximum; and

(*b*) on conviction on indictment, to a fine.

(2) The Department may recover from a person convicted of an offence under paragraph (1) expenses reasonably incurred by it in carrying out works of repair or reinstatement, necessitated by his action.

(**a**) S.I. 1972/1265 (N.I. 14)

Sealed with the Official Seal of the Department of the Environment on 17th June 1994.

(L.S.) *R. W. Rogers*
Assistant Secretary

SCHEDULE 1 regulations 2, 3, 5, 11, 12, 14 and 19

Prescribed concentration or value

TABLE A

Item	*Parameters*	*Units of Measurement*	*Concentration or value (maximum unless otherwise stated)*
1.	Colour	mg/l Pt/Co scale	20
2.	Turbidity (including suspended solids)	Formazin turbidity units	4
3.	Odour (including hydrogen sulphide)	Dilution number	3 at 25°C
4.	Taste	Dilution number	3 at 25°C
5.	Temperature	°C	25
6.	Hydrogen ion	pH value	9.5 5.5 (minimum)
7.	Sulphate	mg SO_4/l	250
8.	Magnesium	mg Mg/l	50
9.	Sodium	mg Na/l	150(i)
10.	Potassium	mg K/l	12
11.	Dry residues	mg/l	1500 (after drying at 180°C)
12.	Nitrate	mg NO_3/l	50
13.	Nitrite	mg NO_2/l	0.1
14.	Ammonium (ammonia and ammonium ions)	mg NH_4/l	0.5
15.	Kjeldahl nitrogen	mg N/l	1
16.	Oxidizability (permanganate value)	mg O_2/l	5
17.	Total organic carbon	mg C/l	No significant increase over that normally observed

Item	*Parameters*	*Units of Measurement*	*Concentration or value (maximum unless otherwise stated)*
18.	Dissolved or emulsified hydrocarbons (after extraction with petroleum ether); mineral oils	µg/l	10
19.	Phenols	µg C_6H_5OH/l	0.5
20.	Surfactants	µg/l (as lauryl sulphate)	200
21.	Aluminium	µg Al/l	200
22.	Iron	µg Fe/l	200
23.	Manganese	µg Mn/l	50
24.	Copper	µg Cu/l	3000
25.	Zinc	µg Zn/l	5000
26.	Phosphorus	µg P/l	2200
27.	Fluoride	µg F/l	1500
28.	Silver	µg Ag/l	10(ii)

Notes: (i) *See* regulation 3(5).
(ii) If silver is used in a water treatment process, 80 may be substituted for 10.

TABLE B

Item	*Parameters*	*Units of Measurement*	*Maximum Concentration*
1.	Arsenic	µg As/l	50
2.	Cadmium	µg Cd/l	5
3.	Cyanide	µg CN/l	50
4.	Chromium	µg Cr/l	50
5.	Mercury	µg Hg/l	1
6.	Nickel	µg Ni/l	50
7.	Lead	µg Pb/l	50

Item	Parameters	Units of Measurement	Maximum Concentration
8.	Antimony	µg Sb/l	10
9.	Selenium	µg Se/l	10
10.	Pesticides and related products:		
	(*a*) individual substances	µg/l	0.1
	(*b*) total substances (i)	µg/l	0.5
11.	Polycyclic aromatic hydrocarbons (ii)	µg/l	0.2

Notes: (i) The sum of the detected concentrations of individual substances.
(ii) The sum of the detected concentration of fluoranthene, benzo 3.4 fluoranthene, benzo 11.12 fluoranthene, benzo 3.4 pyrene, benzo 1.12 perylene and indeno (1, 2, 3 - cd) pyrene.

TABLE C

Item	Parameters	Units of Measurement	Maximum Concentration
1.	Total coliforms	number/100 ml	0(i)
2.	Faecal coliforms	number/100 ml	0
3.	Faecal streptococci	number/100 ml	0
4.	Sulphite-reducing clostridia	number/20 ml	≤1(ii)
5.	Colony counts	number/1 ml at 22°C or 37°C	No significant increase over that normally observed

Notes: (i) *See* regulation 3(6) to (8).
(ii) Analysis by multiple tube method.

TABLE D(i)

Item	Parameters	Units of Measurement	Maximum Concentration or Value
1.	Conductivity	µS/cm	1500 at 20°C
2.	Chloride	mg Cl/l	400
3.	Calcium	mg Ca/l	250

Item	*Parameters*	*Units of Measurement*	*Maximum Concentration*
4.	Substances extractable in chloroform	mg/l dry residue	1
5.	Boron	µg B/l	2000
6.	Barium	µg Ba/l	1000
7.	Benzo 3.4 pyrene	ng/l	10
8.	Tetrachloromethane	µg/l	3
9.	Trichloroethene	µg/l	30
10.	Tetrachloroethene	µg/l	10

Note: (i) *See* regulation 3(3)(*d*).

TABLE E

Item	*Parameters*	*Units of Measurement*	*Minimum Concentration* (i)
1.	Total hardness	mg Ca/l	60
2.	Alkalinity	mg HCO_3/l	30

Note: (i) *See* regulation 3(2).

SCHEDULE 2 regulations 2, 13, 15, 17 and 18

Sampling frequencies

TABLE 1: Sampling frequencies at consumers' taps

Parameters	*Water Supply Zone*		*Sampling Frequency (number per annum)*			
	Volume distributed (m^3/d) for domestic purposes (and, if water is supplied for food production purposes, for those purposes)	*Population supplied*	*Reduced*		*Standard*	*Increased*
			Ground Water	*Surface Water*		
Conductivity or hydrogen ion *Odour (qualitative)* *Taste (qualitative)*	≤100	≤500			4	12
	101– 1000	501– 5000	4	4	6	12
	1001– 2000	5001–10000	4	6	12	24
	2001– 4000	10001–20000	6	12	24	
	4001– 7000	20001–35000	11	21	42	
	7001–10000	35001–50000	15	30	60	

TABLE 2: Sampling frequencies at consumers' taps

Parameters	*Water Supply Zone*		*Sampling Frequency (number per annum)*			
	Volume distributed (m^3/d) for domestic purposes (and, if water is supplied for food production purposes, for those purposes)	*Population supplied*	*Reduced*		*Standard*	*Increased*
			Ground Water	*Surface Water*		
Turbidity *Temperature* *Hydrogen ion* *Nitrate* *Nitrite* *Ammonium* *Iron* *Aluminium* *Manganese* *Colour*	⩽100	⩽500			4	12
	101– 1000	501– 5000			4	12
	1001– 2000	5001–10000			4	24
	2001– 4000	10001–20000	4	4	6	24
	4001– 7000	20001–35000	4	5	10	36
	7001–10000	35001–50000	4	5	10	48
Odour (quantitative) *Taste (quantitative)*	⩽100	⩽500	1		4	12
	101– 1000	501– 5000	1		4	12
	1001– 2000	5001–10000	1		4	24
	2001– 4000	10001–20000	1	4	6	24
	4001– 7000	20001–35000	1	5	10	36
	7001–10000	35001–50000	2	5	10	48

TABLE 3: Sampling frequencies at consumers' taps

Parameters	*Water Supply Zone*		*Sampling Frequency (number per annum)*		
	Volume distributed (m^3/d) for domestic purposes (and, if water is supplied for food production purposes, for those purposes)	*Population supplied*	*Reduced*	*Standard*	*Increased*
Trihalomethanes *Tetrachloromethane* *Trichloroethene* *Tetrachloroethene*	≤7000	≤35000	1	4	12
Copper *Lead* *Zinc* *Pesticides (i)* *Polycyclic aromatic hydrocarbons (ii)*	7001–10000	35001–50000	1	4	24

Notes: (i) ie, any fungicide, herbicide or insecticide; increased or reduced sampling, where required or permitted, may be confined to the substance in question.

(ii) The sum of the detected concentrations of fluoranthene, benzo 3.4 fluoranthene, benzo 11.12 fluoranthene, benzo 3.4 pyrene, benzo 1.12 perylene and indeno (1, 2, 3 - cd) pyrene.

TABLE 4: Sampling frequencies at consumers' taps

Parameters	*Sampling Frequency (number per annum)*	
	Standard	*Increased*
Chloride *Sulphate* *Calcium* *Magnesium* *Sodium* *Potassium* *Dry Residues* *Oxidizability (permanganate value)* *Total organic carbon* *Boron* *Surfactants* *Phosphorus* *Fluoride* *Barium* *Silver* *Arsenic* *Cadmium* *Cyanide* *Chromium* *Mercury* *Nickel* *Antimony* *Selenium* *Total hardness* *Alkalinity*	1	12

TABLE 5: Sampling frequencies at supply points

Water Supply Zone or Combination of Zones		*Sampling Frequency (number per annum)*															
Volume distributed (m^3/d) for domestic purposes (and, if water is supplied for food production purposes, for those purposes)	*Population supplied*	*Table 1* Parameters*				*Table 2* Parameters*				*Table 3* Parameters*				*Table 4* Parameters*			
		Reduced		*Standard*	*Increased*	*Reduced*		*Standard*	*Increased*	*Reduced*		*Standard*	*Increased*	*Reduced*		*Standard*	*Increased*
		GW	*SW*			*GW*	*SW*			*GW*	*SW*			*GW*	*SW*		
≤100	≤500			4	12			4	12	1	2	4	12			1	12
101– 1000	501– 5000	4	4	6	12			4	12	1	2	4	12			1	12
1001– 2000	5001– 10000	4	6	12	24			4	24	1	2	4	12			1	12
2001– 4000	10001– 20000	6	12	24		4	4	6	24	1	2	4	12			1	12
4001– 10000	20001– 50000	15	30	60		4	5	10	60	1	2	4	12			1	12
10001– 20000	50001– 100000	30	60	120		5	10	20	60	2	3	6	24	1	1	2	24
20001– 30000	100001– 150000	45	90	180		8	15	30	60	2	3	6	24	1	2	3	24
30001– 60000	150001– 300000	90	180	360		15	30	60	120	2	3	6	24	2	3	6	24
60001–100000	300001– 500000	90	180	360		30	60	120		3	5	10	24	3	5	10	24
100001–200000	500001–1000000	90	180	360		30	60	120		5	10	20	36	5	10	20	36

*Reference is to Tables 1 to 4
GW = Groundwater
SW = Surface water

TABLE 6: Sampling frequencies at consumers' taps

Parameters	*Water Supply Zone*		*Sampling Frequency (number per annum)*
	Volume distributed (m^3/d) for domestic purposes (and, if water is supplied for food production purposes, for those purposes)	*Population supplied*	*Standard*
Total coliforms Faecal coliforms Residual disinfectant Colony counts	⩽100 101–1000 1001–2000 2001–4000	⩽500 501– 5000 5001–10000 10001–20000 20001–50000	12 12 24 48 at the rate of 12 per 5000 population except in the case of colony counts where the standard number is 52. In cases where the population is not an exact multiple of 5000, the population figure should be rounded up to the nearest multiple of 5000.

TABLE 7: Sampling frequencies for treatment works

Parameters	*Volume of water supplies (m^3/d) for domestic purposes (and, if water is supplied for food production purposes, for those purposes)*	*Sampling Frequency (number per annum)*	
		Reduced	*Standard*
1. Total and faecal coliforms, residual disinfectant and colony counts	⩽2000 2001–6000	12 52	52 104
2. Total and faecal coliforms and residual disinfectant	6001–12000 >12000	104 104	208 365
3. Colony counts	>6000	52	104

EXPLANATORY NOTE

(This note is not part of the Regulations.)

These regulations are concerned with the quality of water supplied for domestic or food production purposes and with the maintenance of records and the publication of information about water quality. The regulations come into operation on 1st October 1994.

Effect is given in Part II of the regulations to Article 7 of Council Directive 80/778/EEC (O.J. No. L229, 30.8.80, p. 11) which relates to the quality of water intended for human consumption. Part IV of the regulations gives effect to Article 12 (monitoring of the quality of water intended for human consumption) of that Directive. In Part IV of the regulations, regulation 22 gives effect, in part, to Article 2 of Council Directive 75/440/EEC (O.J. No. L194, 25.7.75, p. 26) (quality required of surface water intended for the abstraction of drinking water) and to paragraph 3 of Article 4 of that Directive.

Part II prescribes standards of wholesomeness in respect of water that is supplied by the Department of the Environment (''the Department'') and private suppliers for domestic or food production purposes. In particular, it provides that water is to be regarded as wholesome if it contains concentrations or values in respect of various properties, elements, organisms and substances which do not contravene prescribed maximum and, in some cases, minimum concentrations or values. Some of the prescribed maximum and minimum concentrations and values are specified in regulation 3 but most are listed in Tables A to E in Schedule 1. They include the maximum admissible and minimum required concentrations and values specified in Annex I to Council Directive 80/778/EEC.

Part III enables the Department to relax the requirements of Part II subject to conditions, if appropriate. The circumstances in which such relaxation is permissible are consistent with those specified in paragraphs 1 and 3 of Article 9 and paragraph 1 of Article 10 of Council Directive 80/778/EEC.

Part IV provides for the monitoring of water supplies by reference to analysis of samples taken from consumers' taps. Regulation 11 requires the Department to identify, in relation to areas which it is required to determine as ''water supply zones'', such number and location of consumers' taps as will ensure that the samples taken are representative of the quality of the water within the zone. In the circumstances specified in regulation 12 the Department may authorise the taking of samples from points other than consumers' taps. Regulation 13 requires the Department to take a minimum number of samples (''the standard number'') each year in respect of a variety of properties, elements, organisms and substances. The standard numbers are specified in Tables 1 to 6 in Schedule 2 and are not less than those specified in Annex II to Council Directive 80/778/EEC. Regulation 13 also requires samples to be taken where changes in the Department's practices may have had an effect on the quality of the water within the water supply zones.

Part V contains additional provisions relating to sampling. Regulations 17 and 18 require samples to be taken in respect of particular organisms and substances at treatment works and at reservoirs which store treated water. Regulation 19 requires samples to be taken before water is supplied from new sources and from sources which have not recently been used. Regulation 20 prescribes requirements relating to the taking, handling, storage, transport and analysis of samples.

Part VI deals with the treatment of water and regulates the substances, processes and products which may be used by the Department in connection with the supply of water. Regulation 22 imposes requirements relating to the disinfection of water and imposes additional requirements for the treatment of surface water. It prohibits the abstraction for the supply of drinking water of waters below category A3, (as required by Council Directive 75/440/EEC).

Regulation 23 makes provision for securing the elimination or reduction to a minimum of the risk that water will be contaminated after supply by excessive concentrations of copper, lead or zinc. Regulation 24 specifies the circumstances in which the Department may introduce substances or products into water supplied for domestic or food production purposes. Regulation 25 permits use of any process in connection with the supply of water for domestic or food production purposes provided it will not adversely affect the water quality.

Part VII deals with the publication and provision of information by the Department. Regulation 26 requires the Department to prepare and maintain records containing information about the quality of water supplied in its water supply zones. Regulation 27 requires the Department to make these records available for public inspection and to supply district councils with information about the quality of water within its water supply zones, the extent to which Part II has been complied with, details of any relaxations authorised under Part III and of the action which has been taken to secure compliance with Article 3A of the Water and Sewerage Services (Northern Ireland) Order 1973 in relation to water quality. It also requires the Department to provide district councils and health and social services boards with information relating to matters that could affect the health of persons residing in their areas. Regulation 28 requires the Department to publish in the form of a report information about the quality of water supplied by it for domestic and food production purposes.

Regulation 29 creates an offence for wilfully or negligently introducing a process, substance or product in contravention of regulations 24 or 25; anyone found guilty of the offence is liable to a fine.

Extracts from the Official Journal (O.J.) containing copies of the Directives 80/778/EEC and 75/440/EEC are available from Her Majesty's Stationery Office, 16 Arthur Street, Belfast BT1 4GD.

Copies of the 15th Statement of the Committee on Chemicals and Materials of Construction for Use in Public Water Supply and Swimming Pools and any supplements and the List of Substances, Products and Processes Approved under Regulations 25 and 26 for Use in Connection with the Supply of Water for Drinking, Washing, Cooking or Food Production Purposes (issued annually) may be obtained from the Department of the Environment, Romney House, 43 Marsham Street, London SW1P 3PY.