

## ANNEX II

### MONITORING OF RADIOACTIVE SUBSTANCES

#### 1. General principles and monitoring frequencies

All parameters for which parametric values must be set pursuant with Article 5(1) shall be subject to monitoring. However, no monitoring of a specific parameter shall be required where a competent authority can establish that, for a period of time to be determined by them, that parameter is not likely to be present in a given supply of water intended for human consumption in concentrations which could exceed the corresponding parametric value.

In case of naturally occurring radionuclides, where previous results have shown that the concentration of radionuclides is stable, the frequency, in derogation from the minimum sampling requirements set out in point 6, is to be decided by the Member State, taking into consideration the risk to human health. A Member State is not required to monitor water intended for human consumption for radon or tritium or to establish the ID where it is satisfied on the basis of representative surveys, monitoring data or other reliable information that, for a period of time to be determined by them, the levels of radon, tritium or of the calculated ID will remain below the respective parametric values listed in Annex I. In that case, it shall communicate the grounds for its decision to the Commission and provide the Commission with the necessary documentation supporting that decision, including the findings of any surveys, monitoring or investigations carried out. In this context, the provisions with regard to the minimum sampling and analysis requirements set out in point 6 of this Annex do not apply.

#### 2. Radon

Member States shall ensure that representative surveys are undertaken to determine the scale and nature of likely exposures to radon in water intended for human consumption originating from different types of ground water sources and wells in different geological areas. The surveys shall be designed in such a way that underlying parameters, and especially 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. Monitoring of radon concentrations shall be undertaken where there is reason to believe, on the basis of the results of the representative surveys or other reliable information, that the parametric value laid down pursuant to Article 5(1) might be exceeded.

#### 3. Tritium

Member States shall ensure that monitoring of tritium in water intended for human consumption is 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 listed in Annex I. Where monitoring for tritium is required, it shall be carried out at the frequencies indicated in the table appearing in point 6 of this Annex. If the concentration of tritium exceeds its parametric value, an investigation of the presence of other artificial radionuclides shall be required.

#### 4. Indicative dose

Monitoring of water intended for human consumption for the ID shall be carried out where a source of artificial 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 ID is below the parametric value listed in Annex I. Where monitoring for artificial radionuclide levels is required, it shall be carried out at the frequency indicated in the table appearing in point 6 of this Annex. Where monitoring for natural radionuclide levels is required, each Member State shall define the frequency of the monitoring of either gross alpha activity, gross beta activity or

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individual natural radionuclides depending on the screening strategy adopted by it (according to Annex III). The monitoring frequency may vary from a single check measurement to the frequencies indicated in the table appearing in point 6 of this Annex. Where only a single check for natural radioactivity is required, a recheck shall be required at least where any change occurs in relation to the supply likely to influence the concentrations of radionuclides in water intended for human consumption.

## 5. Water treatment

Where treatment to reduce the level of radionuclides in water intended for human consumption has been taken, monitoring shall be carried out at the frequencies indicated in the table appearing in point 6 to ensure the continued efficacy of that treatment.

## 6. Minimum sampling and analysis frequencies

The minimum sampling and analysis frequency for the monitoring of water intended for human consumption supplied from a distribution network or from a tanker or used in a food production undertaking shall be as set out in the following table:

TABLE

### Minimum sampling and analysis frequencies for monitoring of water intended for human consumption supplied from a distribution network or from a tanker or used in a food production undertaking

| Volume of water distributed or produced each day within a supply zone (Notes 1 and 2) m <sup>3</sup> | Number of samples per year (Notes 3 and 4)                                       |
|--|--|
| volume ≤ 100   | (Note 5)   |
| 100 < volume ≤ 1 000   | 1  |
| 1 000 < volume ≤ 10 000  | 1<br>+ 1 for each 3 300 m <sup>3</sup> /d and part thereof of the total volume   |
| 10 000 < volume ≤ 100 000  | 3<br>+ 1 for each 10 000 m <sup>3</sup> /d and part thereof of the total volume  |
| volume > 100 000   | 10<br>+ 1 for each 25 000 m <sup>3</sup> /d and part thereof of the total volume |

Note 1: A supply zone is a geographically defined area within which water intended for human consumption comes from one or more sources and within which water quality may be considered as being approximately uniform.

Note 2: The volumes are calculated as averages taken over a calendar year. A Member State may use the number of inhabitants in a supply zone instead of the volume of water to determine the minimum frequency, assuming a water consumption of 200 l/day/capita.

Note 3: As far as possible, the number of samples should be distributed equally in time and location.

Note 4: In the event of intermittent short-term supply the monitoring frequency of water distributed by tankers is to be decided by the Member State concerned.

Note 5: The frequency is to be decided by the Member State concerned.

Member States shall define sampling frequencies for water intended for human consumption put into bottles or containers intended for sale. In so doing Member States may take into consideration the volume of water produced.

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## 7. **Averaging**

Where a parametric value is exceeded in a particular sample, Member States shall define the extent of resampling necessary to ensure that the measured values are representative of an average activity concentration for a full year.