



SCOTTISH EXECUTIVE

Environment Group

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Dear Geoff,

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Managing water quality from source to tap: Drinking Water Safety Plans for Water Supplies in Scotland.

1. Purpose

The purpose of this letter is to explain the approach the Drinking Water Quality Regulator for Scotland expects to be taken when Drinking Water Safety Plans for water supplies in Scotland are compiled. To that end it lays down the criteria required to be met by the Plans before they will be accepted as being sufficiently comprehensive to give confidence in drinking water supply protection.

2. Background

Traditionally drinking water quality has been assured through regular monitoring of water at source, through treatment stages, and after leaving the water treatment works. This has resulted in a long list of parameters which require to be analysed on a regular, Regulatory basis. Much of this sampling is weighted towards detecting problems in the water leaving the works, or in the distribution system, and therefore tends to produce reactions to problems rather than proactive work to prevent them occurring. It follows from this that the current sampling programmes will not in themselves necessarily ensure the reliable protection of drinking water supplies, but only help to ensure the rapid detection of any problem should it arise.

In the 3rd Edition of their *Guidelines for Drinking Water Quality* the World Health Organisation (WHO) promote a new proactive, risk assessment based process, to manage water quality from source to tap as a supplement to, and to compliment, existing sampling regimes. Comprehensive risk assessment and risk management of all that impinges on water supply, from the catchment to the tap, is seen as essential to guaranteeing the constant supply of safe drinking water as it is focused on identifying hazards and risks to the water supply and preventing them developing into problems, rather than the current method of retrospective monitoring programmes to detect quality problems after they have arisen.

This risk management process is termed a Water Safety Plan (WSP) and was first launched at a conference in Berlin in 2003 and later developed at a second conference in Bonn in February 2004, which enhanced the WHO concept to produce the “Bonn Charter” on the safe production of drinking water, which included support for the WSP approach. The 3rd edition of the WHO guidelines and the “Bonn Charter” were launched in September 2004.

Since then there have been two UKWIR funded reports on the application of WSPs in the UK produced. Firstly there was *Managing Microbial and Chemical Risks from Source to Tap* by John Fawell and John Watkins (Ref No. 03/DW/02/31), which was followed by *Catchment to Consumer: Water Safety Plans Part 2* by Malcolm Brandt and Martyn Wooster of Black & Veatch (Ref No. 05/DW/02/39). As well as these two UKWIR Reports a third report, funded by the Scottish Executive, *Development of Drinking Water Safety Plans in Scotland* (Ref ENV3/04/03) was produced in 2005 which aimed to apply the methodology to the circumstances in Scotland.

This letter explains the Drinking Water Quality Regulator for Scotland’s requirements for the production of Water Safety Plans in Scotland which are based on the four documents mentioned in the preceding paragraphs.

3. Funding and Prioritisation

The production of WSPs in Scotland has been allocated a driver in the investment programme for the Q & S 3 regulatory period. This has been split to provide funding to produce WSPs for water supplies covering 50% of Scottish Water customers by the year 2010, followed by a second allocation to complete WSPs for the remaining supplies by 2014.

While the Drinking Water Quality Regulator recognises that the initial target figure of 50% of customers could be most readily achieved through the production of WSPs for a relatively small number of larger water treatment works **he does not wish this approach to be taken. Rather, he requires that the group of works to be completed by 2010 include the full range of water supply size and treatment type available within Scottish Water, and contains an element of risk-based prioritisation. To this end he wishes to review and agree with Scottish Water those water supplies to be included prior to the start of the production of the Plans.**

4. Scope

The scope for the areas to be covered by each Water Safety Plan is largely outlined in the document *Catchment to Consumer: Water Safety Plans Part 2 (UKWIR Report Ref. No. 05/DW/02/39)*, and Scottish Water is directed towards that document for a detailed list of items to include. However it is the Regulator's view that the Plan must as a minimum identify the Team preparing the WSP, the data gathered on the works, who provided the data and when, the hazards identified from the data, the risk evaluation, both reasoning and outcome, and finally, the steps taken to mitigate those risks including a timetable for any necessary capital improvements.

The Drinking Water Quality Regulator for Scotland also requires that Water Safety Plans encompass all features of the catchment, treatment stages, distribution system, and customers' premises (domestic and commercial), which could impinge on the reliability of the quality of water provided to the customer.

It is equally a requirement that the Water Safety Plans show arrangements for liaison with outside agencies and interested parties. This will include Local Councils, SEPA, Health Authorities, Farmers and other businesses in the catchment, Fire Brigade, and Police. It is particularly important that health professionals such as CPHMs are aware of the development of the plans and that the approach used by Scottish Water is sufficient to provide them with the necessary confidence that public health risks are being identified and controlled. WSPs should also detail arrangements with contractors working on water infrastructure, and show how planning and design are integrated into dealing with identified risks. Finally, arrangements for customer liaison and the handling of emergencies will be included in the Plans.

5. Methodology

The methodology to be adopted is given in *Catchment to Consumer: Water Safety Plans Part 2*, however more detailed examples of the approach that Scottish Water is expected to take are to be found in *Development of Drinking Water Safety Plans in Scotland (Ref ENV3/04/03)*. This document gives examples of the level of detail in data gathering and hazard identification expected for each water treatment works. This does not mean that the examples in the document are viewed as an exhaustive list of items to include; merely that appropriate data for each works down to the illustrated level of detail is expected to be available for audit.

Whilst it is accepted that there may be some room for a generic approach to be taken where works are very similar, or where liaison with outside bodies remains the same for a number of water supplies, **each supply must be assessed in detail on its own, data gathered specifically for that supply, and all other steps taken leading to a Water Safety Plan exclusive to that particular supply.** It is accepted that some of the components of a WSP will exist already within Scottish Water's current systems. The DWQR fully expects these to be included or referenced in the plans, however it is important that where this approach is used, they are applied to the individual circumstances at each site rather than simply providing an incoherent library of documents.

6. Progress Tracking and Reporting

Initially there are two key stages where the Drinking Water Quality Regulator for Scotland would seek input into the production of Water Safety Plans:

- a) as stated under heading 3 above, a meeting is required to agree those water supplies that will have Water Safety Plans prepared before 2010, and
- b) a meeting after the production of the first Water Safety Plan to confirm that the approach and level of detail within the Plan meet the Drinking Water Regulator's expectations.

Thereafter Water Safety Plans should be submitted to the Drinking Water Regulator for Scotland within 28 days of completion to enable him to keep track of progress with the programme and for his comment if appropriate.

Further meetings will be arranged as required and will be dependant on progress with Water Safety Plan production or any issues which may arise.

7. Audit and Sign-off

On receipt of a Water Safety Plan for a particular supply, if he is satisfied that the Plan meets all the requirements of a Water Safety Plan, the Drinking Water Quality Regulator for Scotland will issue a completion notice for that particular Plan. This will confirm that, in his opinion, a suitable approach has been used at that supply to meet the requirements of the Q & S 3 driver and enable the financial obligation to be signed off. The DWQR is not in a position to confirm, or otherwise, that all the risks have been identified and adequately addressed at a particular site.

The Drinking Water Quality Regulator for Scotland may, on occasion, audit a random number of the Water Safety Plans in detail prior to issuing a completion notice. The audit will involve a site visit, interviews with appropriate local Scottish Water staff, and meeting with Scottish Water's Water Safety Plan Team members responsible for that particular Plan.

It is envisaged that further discussion with Scottish Water will be necessary in order to finalise the approach to be used and prioritisation of sites. If you have any queries in the meantime or wish to meet to initiate this discussion, please contact Matt Bower on 0131 244 0743 or contact me directly on 0131 244 0186.

A copy of this letter has been sent to the Water Industry Commission.

Yours sincerely,

Colin McLaren