



DRINKING WATER INSPECTORATE

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DWI Information Letter 02/2012

To: Board Level and Day to Day contacts of Water Companies and to Environmental Health contacts of local authorities in England and Wales

Dear Sir/Madam

Arrangements for demonstrating that the laboratory analysis of samples of drinking water and the associated reporting of analytical results meet regulatory requirements.

1. Purpose

1.1. The purpose of this letter is to inform water companies and local authorities about the system of checking that needs to be in place to ensure that the testing of drinking water samples and the reporting of the associated results complies with the regulations for both public and private water supplies.

2. Background

2.1. In order to comply with the Water Supply (Water Quality) Regulations and the Private Water Supplies Regulations samples must be presented for analysis only to a laboratory that has the appropriate systems in place as set out in the regulations and in the Inspectorate's Guidance on the Regulations. This letter updates previous Information Letters (IL 07/1993 and 09/1996) on this subject.

2.2. This information letter covers not only requirements relating to laboratory analysis but also requirements for reporting of the analytical results by laboratories, the acceptance of these results by water companies and local authorities and the investigation that must be carried out by the water company or the local authority in relation to any unusual or out of range results.

2.3. This letter should be read in combination with either the Guidance on The Implementation Of The Water Supply (Water Quality) Regulations: Appendix 1: Regulation 16 – Analysis Of Samples or Legislative Background to the Private Water Supplies Regulations 2009 Section 9: Section 2.3.5.14 to 2.3.5.21 on Schedule 3 of the Regulations.

3. System of checking of laboratories

3.1. Any laboratory carrying out analysis on drinking water must have in place a system of analytical control that is subject to checking by a person approved by the Secretary of State (in practice DWI) who is not under control of the laboratory or the water company/local authority. In England and Wales the approved person (body) is UKAS.

3.2. In the Inspectorate's Guidance documents best practice for a system of analytical control is defined as that set out in ISO 17025:2005: The General Requirements for the Competence of Testing and Calibration Laboratories.

3.3. All laboratories carrying out analysis of drinking water must therefore obtain and maintain UKAS accreditation equivalent to ISO17025: 2005 and each water company and local authority must ensure all the laboratories to which regulatory samples are submitted are accredited and the accreditation is up to date and valid. It is permitted for a laboratory to choose to use an alternative accreditation agency to UKAS but only if that alternative agency has first sought and obtained approval from the Secretary of State (in practice DWI).

3.4. In addition, and in accordance with the principles of Better Regulation, an agreement is in place between UKAS and DWI that enables a laboratory to seek a further and higher level of accreditation known as the Drinking Water Testing Scheme, (DWTS). DWTS involves UKAS in carrying out periodic audits of sample information and records held by the laboratory (known as vertical audits) and permits UKAS to carry out inspections of certain sampling and analysis arrangements. DWTS does not cover checking of water company/local authority duties in relation to scheduling of sampling, frequency of sampling, or the activities associated with the retention or submission of data to the Inspectorate or making data available to a member of the public.

3.5. By opting for the higher level of accreditation (DWTS) laboratories can significantly reduce the burden of regulation because the need for DWI to routinely audit or inspect the laboratory is obviated. It should be noted that if a laboratory chooses not to opt into the DWTS scheme then they will be subject to risk based vertical audits, including audits of samplers, by DWI instead. From January 2013 onwards, DWI will recover the costs of its audits or inspections of laboratories used by water companies.

3.6. Notwithstanding the agreement in place with UKAS, DWI reserves the right to inspect laboratories which are DWTS accredited, but will only do so where it has reason to believe a serious breach of the regulations may have occurred or where it is in receipt of information to indicate that there is a significant risk that arrangements are not robust or call into question the creditability of regulatory regime.

4. Acceptance of analytical data

4.1. Inherent within any system of quality control by laboratories is the production and assurance of test results that can be used and interpreted by the person commissioning the analysis with reasonable confidence: for example, checking whether results fall within pre-defined criteria, taking steps to prevent incorrect results from being reported and taking appropriate action to prevent a recurrence of similar circumstances.

4.2. Implicit in the system of quality control therefore is the rejection by the laboratory of results produced when the method (including the equipment and facilities) is not in control, as defined within the method and the supporting procedures, at the time of analysis. Similarly when results are produced which meet all the pre-defined criteria, as recorded by the analyst and confirmed as specified within the procedure, then the results are final and cannot be rejected by the laboratory.

4.3. The reporting of results must be impartial and free from influence or pressure whether this comes from management within a laboratory or from the water company or local authority who commissioned the testing. Therefore once confirmed results are made available by the laboratory to the client, whether or not this person is from a department within the same organisation [e.g. a water quality department in a water company or a environmental health officer in a laboratory under the control of the local authority] and the results do not meet the expectations of the recipient, the laboratory cannot change that result retrospectively.

5. Actions by the Water Company following a failure of analysis or a standard

5.1. Where a water company or local authority is informed by the laboratory of the rejection of results (as described in section 4.2 above) they may schedule a resample and should aim to do so where practicable within the window of time relating to the regulatory purpose of the sample (sample frequency). If the sampling requirements of number, regularity and frequency, cannot be achieved then they must inform the Inspectorate of this occurrence and the actions they have taken to prevent a recurrence.

- 5.2. Occasional rejection of samples is to be expected; however, where the situation appears unusual [e.g. multiple samples from multiple sites] requiring the company or local authority to carry out an investigation as to the cause and circumstances of failures of standards, then the Inspectorate expects to be notified to enable its process of regulatory risk assessment. An example of what might be considered “unusual” and trigger notification is multiple aluminium or coliform failures in samples from unconnected sites and/or at unexpected levels, when the laboratory considers the method was in control.
- 5.3. When a water company or local authority receives a result, which has met all quality controls and been accepted as valid and released by the laboratory, the regulations require that water company or local authority to investigate the cause and extent of the failure, or apprehended failure, and identify what the failure is attributable to. It is expected that this investigation will be as wide ranging as necessary, and may include but not be limited to, sampling procedures, conditions and cleanliness of the water fitting including a fitting inspection as necessary, the nature and status of the domestic plumbing, the upstream supply network, including any storage and water treatment, the prevailing source water conditions and the laboratory.
- 5.4. If the investigation determines the failure to be attributable to, for instance; sampling, analysis, storage, treatment, source quality, the network, plumbing or fittings then the water company or local authority is under a duty to arrange for appropriate remedial actions to prevent a recurrence. The investigation findings should be recorded and submitted to the Inspectorate with the relevant monthly (water companies) or annual (local authorities) data return, unless the investigation identifies a potential risk to public health. In the latter instance, the Inspectorate should be notified as soon as practicable.
- 5.5. The discovery that unusual results are associated with either improper sampling or faults with the analysis is part of the investigation. It is not a reason to deem those results as unrepresentative of the water supply nor is it any reason to remove those results from the water company or local authority drinking water quality records. If taken to extreme, such flawed logic and practices could lead to the expunging from the record of every result that does not meet the parameter standard or specification in the regulations with obvious and serious implications for public confidence in the regime for assuring the safety and quality of drinking water.
- 5.6. The appropriate response to an investigation outcome where the cause is attributed to matters relating to the conduct of the sampling or the analysis is for the original results to be retained on the record and to formulate and implement a strategy to prevent a recurrence, recording the matter in a way amenable to audit and retaining the learning for future use.

6. Enquiries

6.1. This letter is being sent electronically to Board Level and day to day contacts of water companies and local authority contacts. Please acknowledge receipt by email to dwi.enquiries@defra.gsi.gov.uk. Hard copies are not being sent but the letter may be freely copied. Any enquiries about the letter should be addressed directly to marcus.rink@defra.gsi.gov.uk.

6.2. Copies of this letter are being sent to Pamela Taylor, Chief Executive, Water UK; John Bourne, Department for Environment, Food and Rural Affairs; Olwen Minney Welsh Government; Sue Petch, Drinking Water Quality Regulator for Scotland; Margaret Herron, Drinking Water Inspectorate for Northern Ireland; Tony Smith and Chairs of the Regional Consumer Council for Water; Noel Wheatley, Ofwat; Nick Cartwright, Environment Agency; Jane Downes, Food Standards Agency; Stephen Moreton and Frances Pollitt, Health Protection Agency

Yours sincerely



Marcus Rink
Deputy Chief Inspector (Operations)