

TGN15 - INSTALLATION AND MAINTENANCE OF FINAL WATER AND SERVICE RESERVOIR SAMPLE POINTS

Introduction

The Water Supply (Water Quality) Regulations 2016 or their equivalents in the devolved administrations, hereafter ‘the Regulations’, require that water companies produce and supply wholesome water. Water companies are required to verify final water quality and effectiveness of disinfection by ensuring samples are taken at the point at which water leaves the site of production. In addition service reservoirs in the supply network must also be sampled to ensure water quality targets and residual chlorine levels are maintained. The location and specification of sampling points must ensure that samples taken are representative of water going in to supply. For full principles to be applied to the sampling of drinking water from treatment works and piped distribution systems, please refer to BS ISO 5667-5.

Good Practice

Installation - Water Treatment Works

1. For each water treatment works there should be at least one sample collection point after the final stage of treatment.
2. For water treatment works with more than one water source, designated sample collection locations should be representative of the output of each water source.
3. Final sample collections points should be as close as possible to the water treatment works generally the point at which the treated water leaves the works.

Installation - Service Reservoirs

1. If the service reservoir has a common inlet and outlet main, samples should only be taken when the main is acting as an outlet ensuring that the sampled water is representative of water that has been stored in the service reservoir.
2. If the service reservoir has two compartments which are hydraulically linked, then this can be treated as a single reservoir and sampled at one sampling location.
3. If the service reservoir has two compartments which are not hydraulically linked, then two sampling locations must be positioned on the outlet of each tank, so that samples are representative of water stored in each compartment.
4. If the service reservoir has two compartments which are not hydraulically linked but the individual outlets combine into a common outlet, a single sample location may be adequate.
5. Sample points should be located as close as possible to the service reservoir up stream of the first customer.

General considerations

1. Ideally, taps and associated sample lines should not be connected to any other equipment, or used for other purposes
2. Taps should not be fitted with attachments or inserts and should be clean, free from

extraneous matter that may affect the microbiological quality of the sample being taken.

3. If the tap is to be flame-disinfected, it is important that there are no flammable materials or fumes nearby.
4. The sampling line should be as short as possible, in good condition and capable of being flushed at full flow rate.
5. The sampling line should not include T-junctions, which might result in stagnation.
6. The sampling line should be dedicated to the supply of treated final water to the sample tap or water stored in service reservoir.
7. Sample points should be in a secure location, protected from adverse weather, vandalism and contamination from the environment.
8. Sample points should not be located in locations which require confined space training.
9. Sample points must include adequate drainage to avoid flooding and risk of contamination.

Construction Materials

1. All materials used for construction, maintenance and repair of sample point locations, including any apparatus which is likely to come into contact with treated potable water must be approved under Regulation 31 of the 'Regulations'.
2. All treatment works and service reservoir sample points should be fitted with sampling taps of hygienic design which comply with National Standards.
3. All sample lines should be constructed from a suitable material and comply with National Standards.

Maintenance

1. All personnel who carry out work around treated or partially treated drinking water must comply with requirements of TGN 1(Medical screening).
2. Periodic cleaning, disinfection and flushing of the sample point should be carried out by appropriately trained personnel.
3. Sample lines and sample taps should be replaced periodically dependant on construction materials selected.
4. All sample points should be inspected periodically and consider the following;
 - i. Health and safety access.
 - ii. Damage which present potential for ingress or vermin.
 - iii. Sample area hygienically clean and will not introduce contamination.
 - iv. Clean waste sink and back plate.
 - v. Sample tap in good condition (i.e.no leakage or dripping).