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Method Statement

Domestic Down Water Services Disinfection

This Method Statement relates to water systems that comprise a water supply pipe feeding a water storage system which in turn distributes domestic cold water within the premises including to some form of heating device to provide hot water.

Preparation

1. Ensure that a full Risk Assessment is carried out by the responsible person prior to commencement of any work.
2. Read the Product MSDS and ensure appropriate PPE is worn before handling the Sanosil product.
3. Ensure adequate stock of Sanosil and Sanosil test strips.
4. Prior to the cleaning sequence, the system should be checked for obvious dead legs, i.e. areas where a section of pipe still has water in it but is not part of the main flow. If there are any such dead legs, suitable alterations must be made to ensure that system water flow through them is achieved.
5. Mains water pipes must be isolated from the supply water at the stop cock or water meter before introduction of Sanosil. Introduce Sanosil to rising mains using a pump and injection fitting.
6. Suitable signage should advise any personnel within the premises that a cleaning process is being undertaken and that water should not be used until it is advised safe to do so.

Procedure

1. The water storage tank should be given a preliminary disinfection. Calculate the volume of water in the storage tank and add the volume of Sanosil product as indicated in the Dosage Chart overleaf. Mix well into the water and leave for one hour.
2. After the hour has elapsed, drain the tank, and/or pump out the remaining water using a submersible pump, taking care to ensure that there is sufficient local drainage to cope with the flow.
3. Clean the tank. This may entail entering the tank to reach the walls and floor of the tank. If this is necessary, wear clean soft plastic over shoes to protect the tank surfaces to ensure no further contamination occurs. Plastic tanks may only need a wipe down while metal tanks may have to be scraped and cleaned with a pressure washer. Tank walls can be contact sprayed with Sanosil S006 using the Koala Pack system. Wet vacuums are usually employed to remove debris and water from the bottom of the tanks.

   Note; if applicable, ensure all regulations regarding working in confined spaces are adhered to.
4. To clean the entire system, it is necessary to calculate the total system capacity. If this is not practical, an estimation can be made by multiplying the tank volume by a factor of 1.3.
5. Add the volume of Sanosil product as indicated in the Dosage Chart overleaf.
6. Drain water from the storage tank through all taps and outlets within the premises to ensure that treated water contacts all the pipework surfaces. (Note comments regarding dead legs in the ***Preparation*** section). Toilets and urinals will need to be flushed to draw water through the cisterns.
7. Check the water leaving the tap/outlet (hot and cold) which is furthest from the storage tank until the presence of Sanosil is detected as indicated by the test strips.
8. When a level of 150 ppm has been achieved on the Sanosil test strip (represented by a dark blue colour on the test strip), close the taps and retain the treated water in the pipework.

9. The hot water system is particularly prone to harbouring bacteria and care should be taken to ensure that there is Sanosil throughout the hot water system. Check drains from calorifiers and all taps and outlets to ensure that there is sufficient Sanosil in the system.
10. If relevant, both duty and standby pumps should be cycled and valves opened to ensure Sanosil contacts all surfaces. Washing machines, dishwashers, and vending machines which are plumbed with flexible hoses should be disconnected and water run to a bucket until Sanosil is detected using the test strips.
11. If the tank was not subject to a preliminary disinfection as detailed above, it should now be cleaned as prescribed. Once cleaned, it should be refilled with fresh water. The volume of Sanosil, which was added to treat the entire system should be again added to the water in the tank.
12. Check outlets over 10 minutes and if less than 150 ppm is detected add more Sanosil until 150 ppm is obtained consistently. The water in the outlets should continue to show a level of 150 ppm Sanosil at the taps.
13. The system should now be left to stand for 1 hour to allow the Sanosil adequate contact time.
14. ***Flushing***
    - The levels of Sanosil in the system are with in the statutory levels for drinking water (Regulation 31 of the Water Supply (Water Quality) Regulations 2000 & 2001 in England and Wales.)
    - As such if site requirements do not allow for full flushing, Sanosil may be left in the system and removed during normal use of the system provided this is not longer than 90 days. If bacterial samples are to be taken then Sanosil will need to be flushed from the system before sampling can occur.
    - If flushing is a requirement; open all the taps and flush the system with fresh water. Flushing toilets and urinals will also aid the removal from the tank fed systems. Final testing using the Sanosil test strips will confirm that the product has been fully removed.
15. Re-instate the system to full service conditions by opening any valves that have been shut during the process and removing the signage.
16. Finally, record all actions in the system Logbook and sign and date the cleaning record sheets.

Summary of Method

1. Read the MSDS for the Sanosil product to be used, wear appropriate safety equipment.
2. Ensure adequate stocks of Sanosil and Sanosil test strips.
3. Calculate the water storage tank capacity.
4. Calculate the system capacity (approximation = 1.3 x tank volume).

   Note: This does ***NOT*** take into account any other water storage capacity which must be added to the system capacity e.g. calorifiers.
5. Add the volume of Sanosil as recommended by the chart below to the water in the tank and mix well.
6. Draw water to all taps (hot and cold) and outlets and test until 150 ppm Sanosil is detected at the outlets.
7. If carrying out a tank clean, after one hour drain the tank (not the system), clean the tank and refill with water and Sanosil to a level of 150 ppm.
8. Flush the system as necessary.
9. Record your actions in the site Logbook and issue certificates to confirm the process.

Dosage Chart

Volume of product to be added to Water System to achieve 150 ppm as Sanosil

Notes; Adhering to this Dosage Chart will ensure that the levels of Sanosil in the system are within the statutory levels for drinking water (Regulation 31 of the Water Supply (Water Quality) Regulations 2000 & 2001 in England and Wales).

These quantities assume no natural oxidative demand from the system water. If there is any significant such demand a dose of Sanosil in excess of that calculated may be necessary.

System Volume (litres)	Sanosil Super 25	Sanosil S015	Sanosil S006
200	30 ml	200 ml	500 ml
500	75 ml	500 ml	1250 ml
1,000	150 ml	1 litre	2.5 litres
2,000	300 ml	2 litres	5 litres
5,000	750 ml	5 litres	12.5 litres
10,000	1.5 litres	10 litres	25 litres

References

- Regulation 31 of the Water Supply (Water Quality) Regulations 2000 & 2001 in England and Wales.
- The control of legionella bacteria in water systems. HSE Approved Code of Practice and Guidance L8. Appendix 1 Check list 3

Health and Safety

- This Method Statement relates specifically to the use of Sanosil products for the stated purpose and is based on extensive tests. Our advice is given to the best of our existing knowledge but is not binding insofar as application and the storage conditions lie beyond our direct control. The description of the products and details of the properties of the compounds do not subsume any liability for damage.
- It is the responsibility of the user to ensure compliance with all relevant statutory regulations and recommended protocols. The use of the product(s) is detailed in the relevant Sanosil MSDS. All Health and Safety issues are the responsibility of the user who should carry out a full Risk Assessment prior to commencement of the any work.
- Particular attention should be paid when carrying out risk assessments in NHS premises where Dialysis units may draw their supply water from the sterilised source. In such incidents either isolation of the Dialysis unit should be undertaken or alternative methods of sterilisation of the water services considered.