

عنوان مقاله:

Chlorine risk assessment in emergency situation in water distribution network

محل انتشار:

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خلاصه مقاله:

One major problem with water quality is the disinfection of drinking water and its detail while drinking water systems are vulnerable and surrounded by a wide range of risks. Since we cannot create a system without any risks, we need to manage them effectively to achieve an acceptable level. In this probe, both hydraulic and free chlorine simulations have been performed in tank 12's water distribution network (which is in Tehran, Iran), and when the chlorine level at the tank was greater than usual, it was specified that which locations at what hours are sensitive. A hazard zonation in terms of maximum chlorine concentration value has been carried out. Finally, with important parameters affecting the sensitivity of the area, priority areas have been defined by Expert Choice software. In the Analytic Hierarchy, 5 criteria that were obtained from Water and Wastewater Company (WWC) technical experts were used. Hence, by elevating chlorine concentration at the tank, the risk assessment for different areas in this network has been carried out. Thereafter, that the nodes watering earlier are more sensitive was objectified, so their water should be cut off first.

کلمات کلیدی:

emergency situation – hydraulic and chlorine analysis – risk assessment – residual chlorine zonation – water distribution network

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