CHEMICAL WATER QUALITY

Assessment of the adequacy of the chemical quality of your drinking water relies on the comparison of the results of water quality analysis with guidelines values. For additives (i.e. chemicals deriving primarily from materials and chemicals used in the production and distribution of drinking water), used by Rand Water emphasis is placed on the direct controlling the quality of these products. In controlling drinking water additives, testing procedures typically asses the contribution of the additives to drinking water and take account of variations over time in deriving a value that can be compared with the guideline value.

Most chemicals are of concern only with long-term exposure; however some hazardous chemicals that may occur in your drinking water can be of concern because of effects that may arise from consequences of exposures over a short period. Where the concentration of the chemical of interest varies widely, even a series of analytical results may fail to fully identify and describe the public health risk e.g., nitrate, which is associated with methaemoglobinaemia (blue baby syndrome) in bottle-fed infants. In controlling this type of hazard, attention should be given to both knowledge of causal factors such as fertilizer use in agriculture and trends in detected concentrations, since this will determine whether a significant problem may arise in the future. Other hazards may arise intermittently, often associated with seasonal activity or seasonal conditions.

A guideline value represents the concentration of a constituent that does not exceed tolerable risk to the health of a consumer over a lifetime of consumption. Guidelines for some chemical contaminants (e.g. lead, nitrate) are set to be protective for susceptible subpopulations. These are also protective of the general population over a lifetime.

Exceeding of a guideline value does not necessarily result in a significant risk to health. Therefore, deviations above the guideline values in either the short or long term do not necessarily mean that the water is unsuitable for consumption. The amount by which, and the period for which, any guideline value can be exceeded without public health impact depends on the specific substance involved. When a guideline value is exceeded, it is advisable that you consult Rand water for advice on suitable action or to further investigate the intake of the substance from sources other than drinking water, the toxicity of the substance, the likelihood and nature of any adverse effects and the practicality of remedial measures.

Rand Water complies with the guideline values of SANS 241 for drinking water quality. The water is purified by means of a conventional purification process, resulting in water that is safe to drink. Guideline values adopted are both practical and feasible, by removing or reducing the concentration of any contaminants to the desired safety level.

Visit **www.reservior.co.za** for further information on water quality in your area.

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RAND WATER