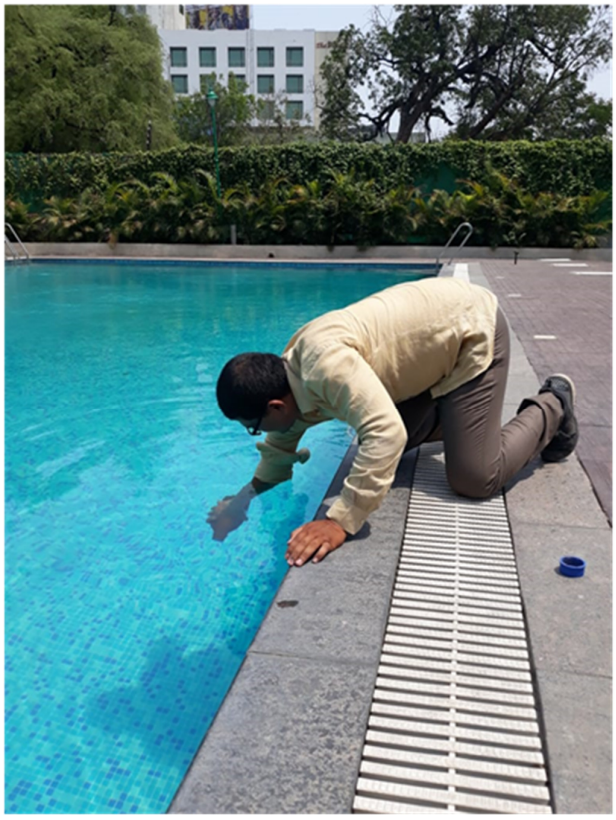
# Poolside Tests of Water Quality (PST)

Swimming pool operators monitor key water quality parameters frequently to adjust dosing of various chemical additives and take corrective action to maintain a safe and comfortable recreational environment for bathers. Some swimming pool systems have built-in arrangements for automatic monitoring of key parameters and adjustment of dosing. Even then pool operators may have to check for critical parameters several times a day, when the swimming pool is in use. The purpose of this service is to provide an independent (third party) testing service, as a quality assurance measure for pool managers and compliance monitoring from public health perspective.

Chlorination is commonly used to disinfect swimming pools. A residual chlorine should be present at all times to assure disinfection of contaminations introduced through usage. Sometimes, chlorine can combine with ammonia and nitrogenous substances primarily from swimmer waste and form chloramines. High-levels of chloramines in pool water affects disinfection, and causes irritation of swimmers' eyes and skin, and cloudy water. The pH of pool water plays a critical role in disinfection. Disinfection efficacy of chlorine is pH dependent. Acidic or highly alkaline water is uncomfortable to the human eye. Too warm or too cold water is not only uncomfortable for swimmers, but may in certain situations be harmful. Too warm waters contribute to dehydration, muscle cramps. Chilly water can shock the body, slow down muscle movements and stress people with heart problems. Hence, maintenance of water temperature within acceptable range for swimming pools is important. Clearwater is aesthetically appealing to swimmers. Visibility is important for swimmer safety.

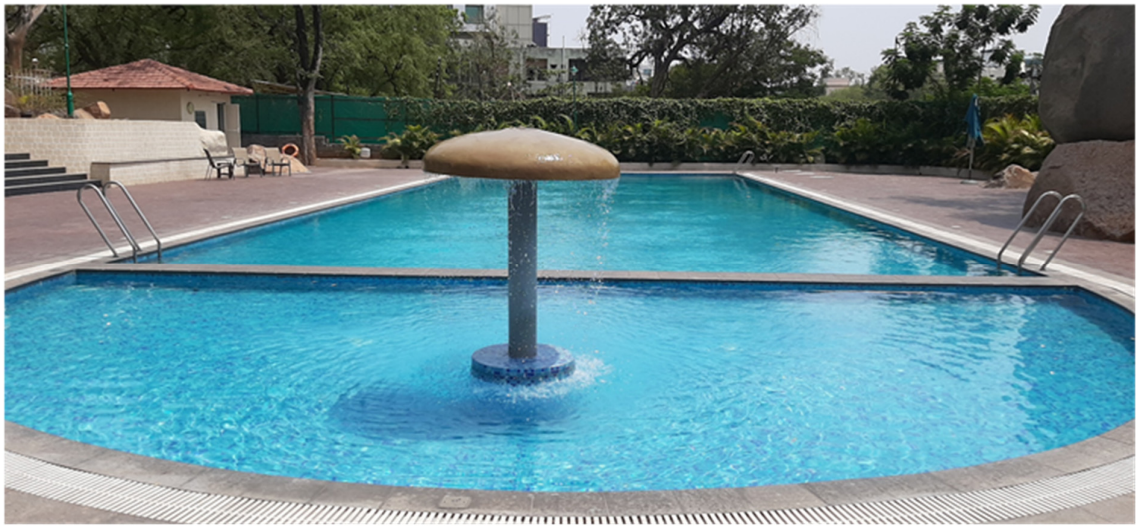
## A. Scope of this Testing Service:

1. On the spot measurement of;
   a. pH
   b. Free, combined, and total residual chlorine,
   c. Water temperature, and
   d. Oxidation-reduction potential (ORP).
2. In addition, observation about operation of swimming pool will be recorded. These will include;
   a. Type of pool operation: (a) Continuous circulation or (b) Fill and empty.
   b. Observations about any floating debris and clarity of pool water.
   c. On-site availability and utilisation of water quality testing kits and devices.
3. Note that the residual chlorine estimations in this test is different from the residual chlorine tests of drinking



water. In case of drinking water, only free residual chlorine is measured. The total residual chlorine measured in this test includes both free and combined residual chlorine.

4. For pH and free chlorine tests, water will be collected in a clean container at a depth of about 9", at least two feet away from inlets and about 1 foot away from the pool walls.
5. Pool water temperature shall be recorded at the same point where chlorine-test sample is collected.
6. Observations on clarity of pool water will be subjective assessment, by the Water Quality Investigator, of relevant characteristics such as; (a) Visibility of drainage outlet on the deep end, (b) visibility of pool floor at the shallow end, middle and deep end, etc.
7. This test does not examine many other physical and chemical parameters that affect aesthetic quality of pool water. This test does not examine for bacterial or viral contamination, fungal or algal growths in pool water.



## B. Recommended frequency for independent (third party) tests:

Once in a fortnight.

## C. Test Report:

Observed values of tested parameters will be provided to the pool custodian immediately after completion of poolside testing. Test report with interpretations will be made available to the management / test requisitioner, subsequently.

Water Quality Testing
@ IHS Laboratory

To schedule swimming poolside tests:
Email: ihslab@ihs.org.in; WhatsApp: +919848011251; Call:040-23211013/4