

9.2 COOLING WATER MANAGEMENT AND GOOD HOUSEKEEPING PRACTICE

No cooling water program can fully deliver its promised benefits unless effective control is exercised. Control should encompass areas such as *cooling system operation, housekeeping and maintenance, treatment application, monitoring, record keeping, training, communication, and corrective actions*. These areas in turn require the application of good practice, sound management principles, and commitment by both the vendor and the customer.

It is now common practice for many vendors to publish and promote their own **field servicing standard**, either as a stand-alone set of procedures or as part of ISO 9000 series quality standards. Since a water treatment program can so easily fail through inadequate control from the responsible field representative, such documents lay out the *minimum acceptable standard for field servicing*. The standards will identify the *frequency of site visits* and what *work has to be undertaken* by the field representative during each visit.

Servicing standards will also provide advice on safety, checklists for inspections, product operating conditions, inhibitor reserves to be maintained, and provide methods of sampling, analysis, monitoring, reporting, etc.

NOTE: It is advisable for cooling system owners to ensure that some type of formalized servicing standard system is employed. It is also advised that buyers of cooling water programs confirm in advance the expected frequency of “routine” service calls to site, and what type of analytical inspection and advisory work may be anticipated, as this will largely determine the amount of time to be spent on-site. It is common for water treatment companies to issue internal instructions governing the amount of “routine” service time that may be spent on a customer’s site as a ratio of the cooling water account value. Typically, in the United States the permitted time will vary (depending on the service company), from 2 to 8 hours on-site, per year for every \$1000 of account value. Thus a customer spending \$20,000 per annum should expect a service engineer to visit perhaps every week for approximately 1 1/2 hours per visit.

The customer should ensure that there is a clearly defined *command structure* and a system for *operational coverage* at all times. Also, all operators should undergo appropriate and on-going *training*. This is an area in which the water treatment company can assist, with “free” seminars and one-on-one training programs.

In addition, the customer should ensure that *lines of communication* are well established, not only within its own organization but also through to the water treatment company as well. And the customer should work with the vendor on instituting a **formal record-keeping system** and **procedures for overcoming out-of-specification conditions**. The record-keeping system may be some form of **log book**, but this is increasingly taking the form of computerized data. Log book systems are still the preferred method of record keeping where control over health risks associated with *Legionella* bacteria is regulated.

Of equal importance is for the field representative to consider some of the **management objectives** and wider **strategic issues** when organizing an overall control system. These issues will tend to vary depending on customer and cooling system needs, although there are normally always some issues common to most situations.