

### 9.2.9 Raw Water Supply System

The raw water supply system (RWSS) provides the initial source of water supplied to the plant demineralized water, potable and sanitary water, normal ultimate heat sink makeup, and fire protection systems. The RWSS and the design requirements of the RWSS are site-specific and will be addressed by the COL applicant.

[[The RWSS contains water received from a site-specific natural source and supplies it directly to the points of use where it may be further processed by the receiving plant systems. The raw water for demineralized water, potable water, fire protection, and ultimate heat sink (UHS) normal makeup is preprocessed as required by filtration, reverse osmosis, chemical treatment, and desalinization of brackish raw water sources prior to use.]] The conceptual design of the RWSS is shown in Figure 9.2.9-1—  
[[Conceptual Site-Specific Raw Water Supply System]].

[[The RWSS does not provide any safety-related function. There is no connection between raw water and the components of other systems that have the potential to contain radiological contamination.]]

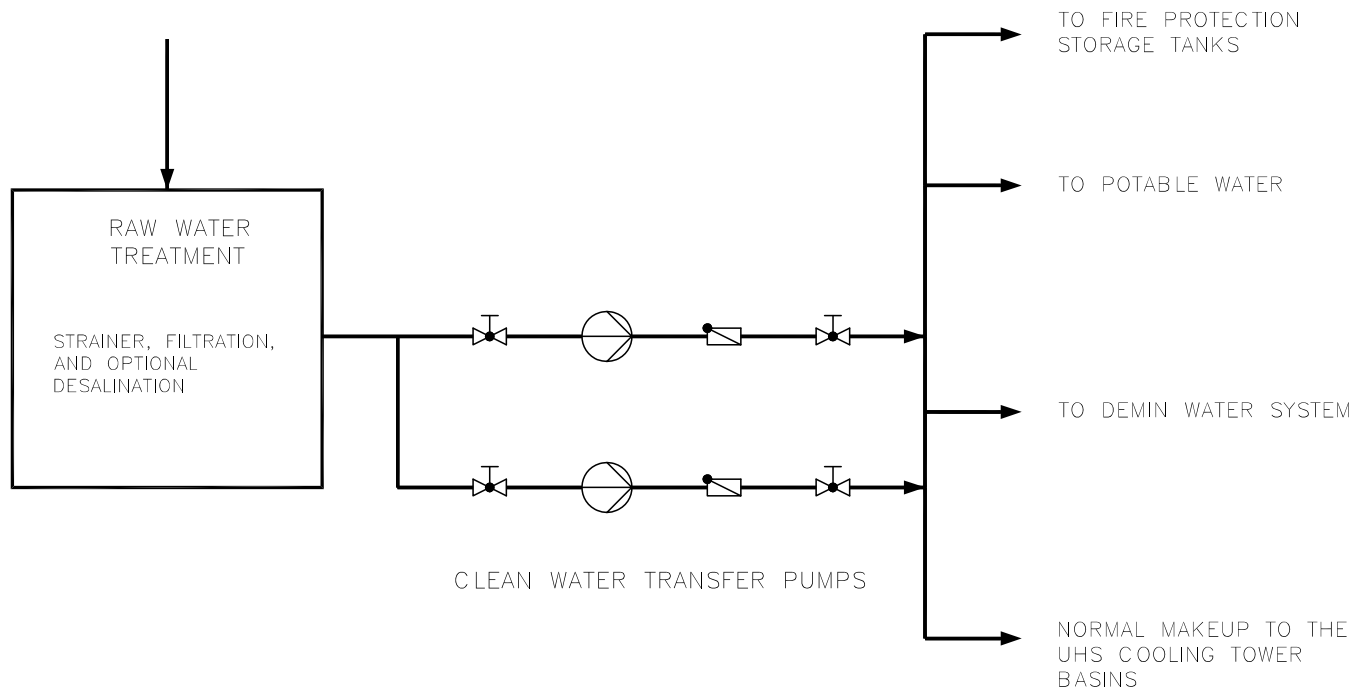
[[Non-safety-related normal makeup water is provided to the UHS cooling tower basins as clean (desalinated) water.]] The certified portion of the normal makeup water system is the supply piping downstream of the flange at the building interface as illustrated in Figure 9.2.5-1. The site-specific portion, conceptually shown in Figure 9.2.5-2, is the responsibility of the COL applicant and is included in the COL information in Table 1.8-2, Item No. 9.2-1. The non-safety-related connections to the UHS cooling tower basins are made at safety-related motor operated valves (MOV), identified in Section 9.2.5. These valves (i.e., 30PED10/20/30/40AA019) close during a DBA on receipt of an accident signal, thereby maintaining UHS cooling tower basin integrity under accident conditions.

Testing is conducted during post-construction, pre-commissioning, and startup as necessary to confirm system integrity and proper operation of individual components and the total system. Portions of the system are leak tested to demonstrate proper operation.

Instrumentation is provided for local and remote system monitoring, including alarms for flows, temperatures and pressures, tank level and temperature, UHS makeup flow, demineralized water system feed flow, potable water system feed flow, valve position indication for selected valves, and pump power on/off indication.

Figure 9.2.9-1—[[Conceptual Site-Specific Raw Water Supply System]]

RAW WATER FROM A SITE SPECIFIC NATURAL SOURCE



RWS001 T2