

**OPTIONAL WORKSHEET**  
**INTERVIEW & OBSERVATION: WATER & DIALYSATE TECHNICIAN**

**Facility:** \_\_\_\_\_ **CCN:** \_\_\_\_\_

**Water Technician:** \_\_\_\_\_ **ID #:** \_\_\_\_\_ **Date/time:** \_\_\_\_\_

**Surveyor:** \_\_\_\_\_

Introduce yourself and explain the purpose of the interview. Ask the staff member routinely responsible for operating the water treatment system to accompany you as you inspect the water treatment components so that you may concurrently interview that individual about the water treatment system. Have this staff member identify and describe the function of each water treatment component, following the printed schematic diagram of the water treatment system. Ask him/her to explain how the proper function of each component is verified and what actions would be taken if a component fails. Observe the actual testing of water for chlorine/chloramine levels.

<b>Source water</b>	<b>Deficient Practice?</b>	
What is the water source? How do facility personnel communicate with the source water provider? How is the facility notified of changes in the source water (i.e., addition of chemicals)? What contingency plans are in place for water system failure?	<input type="checkbox"/> V182 <input type="checkbox"/> V408	<input type="checkbox"/> No
<b>Materials compatibility</b>	<b>Deficient Practice?</b>	
OBSERVE: What, if any, components which contact the purified water (i.e., after the RO or DI) are made of materials such as copper, brass, galvanized material, or aluminum?	<input type="checkbox"/> V212	<input type="checkbox"/> No
<b>Organization of water treatment system</b>	<b>Deficient Practice?</b>	
OBSERVE: Does the schematic diagram accurately reflect the water treatment system?	<input type="checkbox"/> V187	<input type="checkbox"/> No
OBSERVE: Is there a method for identifying the valves and their correct operating positions?	<input type="checkbox"/> V187	<input type="checkbox"/> No
OBSERVE: Are there any "dead legs", which cannot be disinfected?	<input type="checkbox"/> V211	<input type="checkbox"/> No
OBSERVE: Is the water distribution system designed to minimize microbial growth, with continuous flow during operating hours?	<input type="checkbox"/> V211	<input type="checkbox"/> No
<b>Carbon Adsorption</b>	<b>Deficient Practice?</b>	
OBSERVE: Are there 2 carbon tanks/banks of tanks, with a sample port between?	<input type="checkbox"/> V192 <input type="checkbox"/> V195	<input type="checkbox"/> No
What is the empty bed contact time (EBCT) of the carbon tanks	<input type="checkbox"/> V192 <input type="checkbox"/> V195	<input type="checkbox"/> No
How are carbon tanks monitored?	<input type="checkbox"/> V196	<input type="checkbox"/> No

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<b>Carbon Adsorption</b>	<b>Deficient Practice?</b>	
What tests are done for chlorine/chloramines? When are the chlorine/chloramines tests done? What is the maximum allowable result?	<input type="checkbox"/> V196	<input type="checkbox"/> No
If the maximum level is exceeded, what actions are taken to protect patients from exposure to chlorine/chloramines?	<input type="checkbox"/> V197 <input type="checkbox"/> V200 <input type="checkbox"/> V201 <input type="checkbox"/> V202 <input type="checkbox"/> V203	<input type="checkbox"/> No
<b>Water testing for chlorine/chloramines</b>	<b>Deficient Practice?</b>	
OBSERVE: Review written instructions for the test prior to observation of staff. The sample must come from the sample port after the primary carbon tank. Is the test performed correctly? Are the correct reagents used for the correct sample size? Are they within the expiration dates? Are they sufficiently sensitive for detection of unsafe chloramines levels? If a digital meter is used, is it zeroed prior to testing?	<input type="checkbox"/> V196 <input type="checkbox"/> V403	<input type="checkbox"/> No
<b>Reverse Osmosis (RO)</b>	<b>Deficient Practice?</b>	
How often is the water quality monitored?	<input type="checkbox"/> V200	<input type="checkbox"/> No
What is the set point for the water quality alarm? How was the set point determined?	<input type="checkbox"/> V199	<input type="checkbox"/> No
Is there a visible and audible alarm to notify staff in the patient treatment area of poor water quality?	<input type="checkbox"/> V200	<input type="checkbox"/> No
How will poor quality water be prevented from reaching the dialysis stations?	<input type="checkbox"/> V200	<input type="checkbox"/> No
How is the percent rejection rate determined? What actions are taken if percent rejection rate falls below 90%?	<input type="checkbox"/> V200 <input type="checkbox"/> V201	<input type="checkbox"/> No
<b>Deionization (DI)</b>	<b>Deficient Practice?</b>	
OBSERVE: DI must be present if there is no RO, or may be present with RO as “polish” or back up.	<input type="checkbox"/> V???	<input type="checkbox"/> No
How is the DI system monitored?	<input type="checkbox"/> V202	<input type="checkbox"/> No
Is there an audible and visual alarm in the patient treatment area?	<input type="checkbox"/> V203	<input type="checkbox"/> No
What water quality level would cause the alarm to sound?	<input type="checkbox"/> V???	<input type="checkbox"/> No

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<b>Deionization (DI) continued</b>	<b>Deficient Practice?</b>	
What actions are taken if a DI tank exhausts and water resistivity drops below acceptable levels?	<input type="checkbox"/> V203	<input type="checkbox"/> No
If DI tanks are stored onsite but offline of the water treatment system, is there a written procedure for flushing the tanks prior to placing them in-line?	<input type="checkbox"/> V???	<input type="checkbox"/> No
<b>Additional standard components of the water treatment system</b>	<b>Deficient Practice?</b>	
OBSERVE: Verify that each water treatment component is set up and monitored as recommended in the corresponding tags (refer to AAMI Table 4 on the “Monitoring the Water System” laminate or in the Interpretative Guidance following tag V250).	<input type="checkbox"/> V____ <input type="checkbox"/> V____ <input type="checkbox"/> V____ <input type="checkbox"/> V____	<input type="checkbox"/> No
Interview the person responsible for daily monitoring of the water treatment system to assess that s/he is knowledgeable regarding the normal parameters of the function of each component and what to do if a component fails. Components may include the backflow prevention device, temperature/blending valve, booster pump, sediment filter(s), cartridge filters, softener, ultraviolet irradiator, and ultrafilters.	<input type="checkbox"/> V188 <input type="checkbox"/> V189 <input type="checkbox"/> V190 <input type="checkbox"/> V191 <input type="checkbox"/> V207 <input type="checkbox"/> V214 <input type="checkbox"/> V215 <input type="checkbox"/> V260	<input type="checkbox"/> No
<b>Water storage tank</b>	<b>Deficient Practice?</b>	
OBSERVE: Does it have a conical base (to minimize microbial growth) and is it followed by an ultrafilter or other bacterial control device?	<input type="checkbox"/> V208 <input type="checkbox"/> V209	<input type="checkbox"/> No
<b>If any non-standard water treatment components are present</b>	<b>Deficient Practice?</b>	
OBSERVE: Determine their function, any potential risks the component presents to patients, and how the component may alter the quality of the product water. Is the chemical injection system, if any, maintained and monitored per manufacturer’s DFU?	<input type="checkbox"/> V198	<input type="checkbox"/> No
<b>Disinfection</b>	<b>Deficient Practice?</b>	
How and how often are the water treatment equipment and distribution system disinfected, e.g., ozone, hot water disinfection, chemical disinfection?	<input type="checkbox"/> V216 <input type="checkbox"/> V217 <input type="checkbox"/> V218 <input type="checkbox"/> V219	<input type="checkbox"/> No
Is there written procedure for disinfection?	<input type="checkbox"/> V259	<input type="checkbox"/> No
When are water cultures and endotoxin/LALs obtained in relation to disinfection and from which sample sites?	<input type="checkbox"/> V213 <input type="checkbox"/> V254	<input type="checkbox"/> No

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<b>Disinfection (continued)</b>	<b>Deficient Practice?</b>
How are samples collected and how are cultures and LALs performed, e.g., in-house "dip" samplers, in-house LALs, outside lab?	<input type="checkbox"/> V252 <input type="checkbox"/> V256 <input type="checkbox"/> V257 <input type="checkbox"/> V258 <input type="checkbox"/> No
<b>Dialysate preparation and delivery</b>	<b>Deficient Practice?</b>
OBSERVE: Acid and bicarbonate concentrate mixing and testing, if possible. Review the mixing logs.	<input type="checkbox"/> V___ <input type="checkbox"/> No
What tests are done to ensure proper concentration of acid and/or bicarbonate is achieved?	<input type="checkbox"/> V229 <input type="checkbox"/> No
How long is mixed bicarbonate kept?	<input type="checkbox"/> V233 <input type="checkbox"/> No
How and how often are acid and bicarbonate mixing tanks emptied (should be completely before another batch is mixed)?	<input type="checkbox"/> V231 <input type="checkbox"/> V232 <input type="checkbox"/> No
How are the dialysate mixing systems disinfected? If ozone is used for disinfection, how is sufficient concentration assured? Is the bicarbonate system disinfected weekly?	<input type="checkbox"/> V230 <input type="checkbox"/> V239 <input type="checkbox"/> V241 <input type="checkbox"/> No
What bacterial surveillance is done on the dialysate mixing and delivery systems?	<input type="checkbox"/> V242 <input type="checkbox"/> No
Are all containers of dialysate concentrates labeled clearly?	<input type="checkbox"/> V228 <input type="checkbox"/> No
How are the concentrate jugs maintained?	<input type="checkbox"/> V243 <input type="checkbox"/> V244 <input type="checkbox"/> No
Are concentrates ever spiked with additional electrolytes? Who is responsible for doing this? Are there any spiked jugs of concentrate available for use now? If so, OBSERVE: are they appropriately labeled?	<input type="checkbox"/> V235 <input type="checkbox"/> V236 <input type="checkbox"/> No
If dialysate concentrates are centrally delivered, what systems are in place to prevent accidental mix-ups?	<input type="checkbox"/> V222 <input type="checkbox"/> V245 <input type="checkbox"/> V246 <input type="checkbox"/> V247 <input type="checkbox"/> No
<b>Additional Questions/Comments</b>	<b>Deficient Practice?</b>
Is there anything else you would like to tell me about the facility's water or dialysate?	<input type="checkbox"/> V___ <input type="checkbox"/> V___ <input type="checkbox"/> V___ <input type="checkbox"/> No