

**ESRD CORE SURVEY WORKSHEET
WATER & DIALYSATE REVIEW: OBSERVATION & INTERVIEW**

Facility: _____ CCN: _____ Surveyor _____

Technician(s): _____ ID #: _____ Date/time: _____

You may need to interview more than one Technician, based on their responsibilities for water treatment and dialysate preparation.

Carbon System and Chlorine Removal	Trigger Identified?	
OBSERVE: Are there 2 carbon tanks or banks of tanks with a sample port between?	<input type="checkbox"/> V192	<input type="checkbox"/> No
ASK: What is the empty bed contact time (EBCT) of the carbon tanks- <i>note: surveyors are not expected to calculate EBCT. If the technical staff are unable to verbalize, ask for documentation of the EBCT</i>	<input type="checkbox"/> V195	<input type="checkbox"/> No
ASK: What test is done for chlorine/chloramines? When is the test done? What is the maximum allowable result?	<input type="checkbox"/> V196	<input type="checkbox"/> No
ASK: If the maximum level of 0.1 mg/L total chlorine is exceeded, what actions are taken to protect patients from exposure to chlorine/chloramines?	<input type="checkbox"/> V197	<input type="checkbox"/> No
Water Testing for Total Chlorine	Trigger Identified?	
OBSERVE: Total Chlorine test: <i>If you are unfamiliar with the testing equipment, review written instructions for the test prior to observation of staff. The sample must come from the sample port after the primary carbon tank.</i> 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 to detect 0.1 mg/L total chlorine? If a digital meter is used, is it zeroed prior to testing? If strips are used, is the quantitative method of testing used?	<input type="checkbox"/> V196	<input type="checkbox"/> No
Reverse Osmosis (RO) & Continuous Water Quality Monitor	Trigger Identified?	
OBSERVE: The RO unit and the water quality monitoring system. Is there a continuous water quality monitor and an audible alarm to notify staff in the patient treatment area of poor water quality? (<i>do not require an alarm test</i>)	<input type="checkbox"/> V200	<input type="checkbox"/> No
ASK: How is the water quality monitored? What is the set point for the water quality alarm? What actions are taken if the percent rejection falls below 90% or the water quality exceeds the set point?	<input type="checkbox"/> V199 <input type="checkbox"/> V200	<input type="checkbox"/> No

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Deionization (DI)	Trigger Identified?	
<p>OBSERVE: Is a DI system present in the water treatment system? <i>(Note: DI should not be used as the primary water purification component, except on a temporary basis due to RO failure (V205))</i></p> <p>ASK: Does the facility back-up plan for water system failure include the use of DI? <i>(If DI is part of the back-up plan, verify that the issues in the next 2 fields below are included in the back-up plan)</i></p>	N/A	N/A
<p>OBSERVE: Is there a functional, continuous resistivity monitor after the DI system, with an audible and visual alarm in the patient treatment area? Is there an automatic divert-to-drain component or automatic cut-off valve to prevent water with resistivity <1 megohm from reaching the dialysis stations? Is there an ultrafilter after the DI system?</p>	<input type="checkbox"/> V202 <input type="checkbox"/> V203 <input type="checkbox"/> V204	<input type="checkbox"/> No
<p>ASK: How often is the DI system monitored? What resistivity level would cause the alarm to sound? What actions are taken if a DI tank exhausts and water resistivity drops <1 megohm?</p>	<input type="checkbox"/> V202 <input type="checkbox"/> V203 <input type="checkbox"/> V260	<input type="checkbox"/> No
Disinfection and Water and Dialysate Microbiological Monitoring	Trigger Identified?	
<p>ASK: How often is the water distribution system disinfected?</p>	<input type="checkbox"/> V219	<input type="checkbox"/> No
<p>ASK: When are water cultures and endotoxin/LALs obtained in relation to disinfection and from which sample sites?</p>	<input type="checkbox"/> V213 <input type="checkbox"/> V254	<input type="checkbox"/> No
<p>ASK: How often are dialysate cultures taken from each hemodialysis machine? How many machines are cultured each month?</p>	<input type="checkbox"/> V253	<input type="checkbox"/> No
<p>ASK: How are samples of water and dialysate collected and how are cultures and LALs performed, e.g., in-house "dip" samplers, in-house LALs, outside lab?</p>	<input type="checkbox"/> V252 <input type="checkbox"/> V253 <input type="checkbox"/> V254 <input type="checkbox"/> V255 <input type="checkbox"/> V256 <input type="checkbox"/> V257 <input type="checkbox"/> -V258	<input type="checkbox"/> No
<p>ASK: What are the action and maximum allowable microbiological levels for product water and dialysate? What actions are taken when those levels are exceeded?</p>	<input type="checkbox"/> V178 <input type="checkbox"/> V180	<input type="checkbox"/> No

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Dialysate Preparation and Delivery	Trigger Identified?	
OBSERVE: Do the dialysate mixing systems appear maintained?	<input type="checkbox"/> V403	<input type="checkbox"/> No
ASK: Are batches of bicarbonate and/or acid dialysate concentrates mixed on-site? What verification testing is done for batches of acid concentrate?	<input type="checkbox"/> V229	<input type="checkbox"/> No
ASK: How long is mixed bicarbonate concentrate kept?	<input type="checkbox"/> V233	<input type="checkbox"/> No
ASK: Are acid 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 clearly labeled?	<input type="checkbox"/> V235 <input type="checkbox"/> V236	<input type="checkbox"/> No
Review of Facility Water/dialysate Oversight Logs	Trigger Identified?	
REVIEW: <u>2 months of total chlorine testing logs</u> <ul style="list-style-type: none"> • Are there trends of omitted tests? • Did the level exceed 0.1mg/L total chlorine? Were appropriate actions taken? 	<input type="checkbox"/> V196 <input type="checkbox"/> V197	<input type="checkbox"/> No
REVIEW: <u>2 months of RO function monitoring</u> (NOT all gauge readings in the water system) <ul style="list-style-type: none"> • Was the water quality recorded daily (TDS or conductivity)? • Was the % rejection monitored? 	<input type="checkbox"/> V199 <input type="checkbox"/> V200	<input type="checkbox"/> No
REVIEW: <u>12 months or most recent product water chemical analysis</u> <ul style="list-style-type: none"> • Was a chemical analysis done at least annually? 	<input type="checkbox"/> V201	<input type="checkbox"/> No
REVIEW: <u>6 months of microbiological testing of water and dialysate</u> <ul style="list-style-type: none"> • Were monthly cultures and endotoxin levels tested from identified sites in the water treatment and distribution system, and dialyzer reprocessing room (if applicable)? • Were dialysate cultures and endotoxins tested from at least 2 hemodialysis machines per month, and each machine cultured at least annually? • If culture or endotoxin results exceeded action levels (50 CFU/1 EU) or maximum allowable levels (200 CFU/2EU), were appropriate actions taken? 	<input type="checkbox"/> V213 <input type="checkbox"/> V253 <input type="checkbox"/> V178 <input type="checkbox"/> V180	<input type="checkbox"/> No

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Review of Facility Water/dialysate Oversight Logs (continued)	Trigger Identified?	
<p>REVIEW: <u>If DI present or used in past 12 months, DI monitoring logs for 2 months</u></p> <ul style="list-style-type: none"> • Were resistivity readings recorded at least 2 times a day? • If resistivity fell below 1 megohm, was dialysis stopped and appropriate actions taken to resolve the problem? 	<input type="checkbox"/> V202 <input type="checkbox"/> V203	<input type="checkbox"/> No
Review of Technical Practice Audits	Trigger Identified?	
<p>REVIEW: <u>12 months of audits of staff</u> conducting water and dialysate testing, dialysate mixing, dialysate pH and conductivity testing at the point of use (HD machines)</p> <ul style="list-style-type: none"> • Were periodic audits (not less than annually) of staff conducting technical procedures done? 	<input type="checkbox"/> V260	<input type="checkbox"/> No