

## RO Pretreatment

To dechlorinate 3,000 gallons per day (gpd) that flows through the RO system (1,500 gpd usable RO permeate plus 1,500 gpd of brine waste), two-thirds of a cubic foot of redox medium was installed ahead of the RO elements. The medium was followed by carbon block filtration, which polishes the water after the redox medium for total chlorine removal and filters particulate matter. The redox medium captures particles down to about 20 microns, while the carbon filters capture particles as small as 0.5 micron.

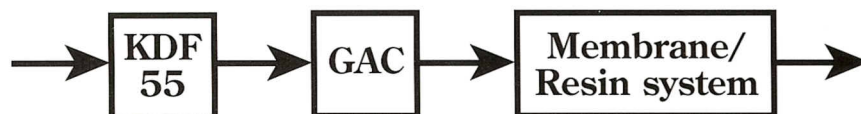
Since the carbon block filters do not rapidly clog with particulates, water flows through the filter for maximum contact with the carbon granules and effective total chlorine removal, rather than seeking an alternate flow path that would tend to reduce retention time within the filter. The medium is back-washed every night to remove collected particulate matter. Because the load is shared with the redox medium, the useful life of the carbon block filters has been extended to more than 1-1/2 years.

Water quality in this part of the system is continuously monitored as it leaves the redox alloy medium, at the output of the carbon block filters and outside the RO system. Water feed to the RO system is also heated at approximately 77 degrees Fahrenheit because RO membranes operate at optimal efficiency between 75 F and 80 F. Operating at this somewhat elevated temperature provides the maximum amount of useful water out of the RO while minimizing the waste brine that must be discharged into the sanitary sewer system.

Type I water is difficult to generate continually. Water quality must constantly be monitored at every step throughout UCL's system, especially at the POU, to assure that each procedure is using the proper quality water. This is

# KDF 55 process medium removes more than 95% of chlorine — extends the life of GAC up to 15 times

Using KDF® 55 redox alloy medium ahead of the granular activated carbon bed in your water treatment system removes more than 95% of the chlorine in your water before it reaches the carbon. That preserves GAC capacity, freeing the carbon bed to remove organic contaminants more efficiently and extending GAC service life up to 15 times.



KDF 55 medium removes impurities from water by exchanging electrons with them in a redox (oxidation/reduction) reaction. In addition to chlorine, this highly efficient, long lasting, recyclable medium also controls microorganisms and removes soluble heavy metals. Which means greater protection for reverse osmosis membranes or ion exchange resins.

For more efficient and effective feedwater purification, longer intervals between GAC rebeds, reduced carbon media disposal requirements, and significantly lower overall water treatment costs, use KDF 55 process medium ahead of your GAC bed.

**For complete information including a free product sample, call:**

**1-800-437-2745.**

(Fax: 1-800-533-3584)

**See Us at WQA Booth #1314**



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most important in medical testing applications, according to Steve Raymond, because it eliminates water quality as a potential variable that could effect testing accuracy. □

Charlie Hauser owns and operates Hauser Water Conditioning, Manchester, IA. Information for this article was provided by KDF Fluid Treatment, Inc.