

## Method

Hexavalent chromium (Cr<sup>6</sup>) is removed from water and recovered to levels below 1ppb at very low cost using the **Cuf** process. The **Cuf** High Solids Contact Reactor (HSCR) is operated in a reductive mode to reduce all hexavalent chromium to trivalent chromium (Cr<sup>6</sup> → Cr<sup>3</sup>) which immediately precipitates into insoluble Cr(OH)<sub>3</sub>. The chromium hydroxide is filtered by the **Cuf** process, and subsequently concentrated into a wet sludge by the DeWRS technology. This process creates a Zero-Liquid Discharge (ZLD) solution.

## Enhanced Performance

The **Cuf** process is highly effective and will reduce Cr<sup>6</sup> levels below 1ppb, regardless of influent concentrations. All the chromium is converted into insoluble chromium hydroxide, thus total chromium concentrations will be near 1ppb. In a matter of seconds, the source water is purified by the **Cuf** process with no liquid waste stream produced (Other processes produce a backwash or brine residual stream).

## Application

The **Cuf** can be used to remove hexavalent chromium in drinking water, reuse and other applications.

## Features & Benefits

A key advantage to the **Cuf** Cr<sup>6</sup> removal solution is that it is a complete solution. The **Cuf** process is essentially mining Chromium from the source water and producing a wet neutral pH sludge available for commercial purposes.



Recovered Chrome

## Cost Structure

Typical operating cost for the **Cuf** process to remove and recover Cr<sup>6</sup> below 1ppb is \$0.06 cents per thousand gallons (\$0.016 cents per m<sup>3</sup>) assuming a power cost of \$0.06 per kWh.

## Verification

Several **Cuf** Pilot systems are available for on-site verification testing.