

Na dithionite and Fe+2 sulfate Injection

Former Chrome Plating Industrial Facility

Kaukauna, WI

DPT Injection

Project Summary: ORIN successfully treated highly contaminated groundwater by injecting a solution of Sodium dithionite and Ferrous sulfate. The average depth to groundwater is 6 to 10 ft. The site experienced historically fluctuating levels of hexavalent chromium between 3,750 ppb and 44,600 ppb in the most impacted well (MW-7R). 250 gallons of treatment chemistry solution was injected into each of 18 drilled injection wells. The equipment and workspace were staged and conducted inside the facility. Minor daylighting was experienced and contained. Of the impacted 48,127 ft² pre-treatment plume area, as designated by values in exceedance of 100 ppb, two source areas were identified. The remedial activities were focused around these source areas.

Reducing Chromium

Site Conditions:

Groundwater Contaminants –

Hexavalent Chromium

11,700 ppb Average

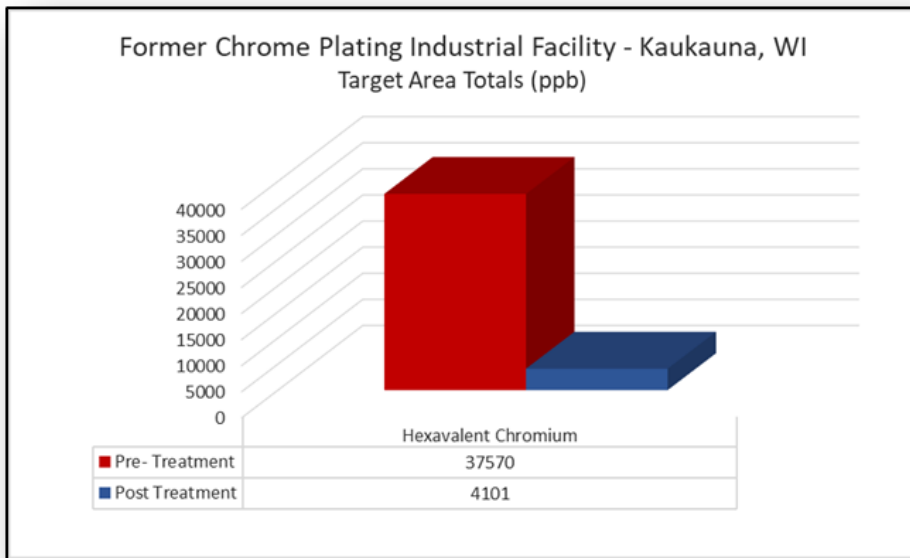
Impacted Matrix –

Silty Sand

Treatment Chemistry –

Sodium dithionite and

Ferrous sulfate



Project Results: The total hexavalent chromium concentrations within the impacted groundwater decreased by approximately 89%. In contrast and excluded as an outlier, only MW-7R within the primary source area rebounded to pre-treatment levels, indicating previously unknown hotspots. Overall, the plume area, in exceedance of 100 ppb, decreased by approximately 44%. This data reflects 2 years of post-treatment monitoring.