



BROCHURE

Leading Hexavalent Chromium Cr(VI) Treatment Solutions



PROTECTING COMMUNITIES WITH PROVEN TECHNOLOGY

ATEC Water Systems delivers innovative, scalable solutions for the removal of hexavalent chromium Cr(VI) in groundwater. With over 500 system installations across North America, we're setting the standard for groundwater treatment performance and reliability.

Why Cr(VI) Matters

Hexavalent chromium Cr(VI) is a naturally occurring contaminant linked to serious health effects. In 2024, California reinstated a maximum contaminant level (MCL) of 10 parts per billion (ppb), placing new pressure on utilities to deliver compliant water fast. ATEC's systems are purpose-built for this challenge.

Why Water Systems Choose ATEC

- **500+ Installations Across North America** – A trusted name in groundwater treatment.
- **California DDW-Approved** – Confidence in regulatory compliance.
- **Pilot-Validated Performance** – Real-world results under demanding conditions.
- **Tailored Solutions** – Modular, scalable, and custom designed for your needs.

Custom Design & Engineering

ATEC systems are modular, scalable, and automation-ready, with designs ranging from 20 GPM to over 5,000 GPM. Each system is customized to local water quality, flow rate, and site conditions to maximize performance and minimize operational complexity.



Our Solution: RCF Technology

ATEC's Reduction-Coagulation-Filtration (RCF) system, approved by California's Division of Drinking Water, offers unmatched performance for Cr(VI) removal. It's a field-proven, high-efficiency process that:

- **Reduces Cr(VI) to Cr(III):** Using ferrous chloride injection.
- **Promotes Floc Formation:** Through air or oxidant eduction to aid capture.
- **Filters with Precision:** Manganese dioxide media ensures effective removal.



Key Advantages

- **>99% Removal Efficiency** – Achieves levels well below 10 ppb.
- **Multi-Contaminant Treatment** – Simultaneously treats iron, manganese, arsenic, and more.
- **Scalable Design** – System capabilities from 20 GPM to 5,000 GPM.
- **Low Maintenance** – Automated controls reduce operator burden; media typically lasts 20+ years, minimizing replacement costs.
- **Retrofit-Friendly** – Seamlessly integrates into existing infrastructure.

Beyond Cr(VI): Full-Spectrum Groundwater Treatment

ATEC systems are engineered to address a wide range of groundwater contaminants commonly found alongside or independent of hexavalent chromium. Our treatment platforms can be tailored to meet site-specific requirements for both primary and secondary contaminants.

Iron & Manganese – Frequently present in groundwater, these aesthetic contaminants contribute to discoloration, taste, odor, and scaling. ATEC's systems routinely co-treat iron and manganese alongside Cr(VI) using oxidation and filtration processes.

Arsenic – A naturally occurring toxic element regulated at a maximum contaminant level (MCL) of 10 ppb by the U.S. EPA. ATEC's technologies are designed to remove both arsenic (III) and arsenic (V), with pre-oxidation and filtration configurations available depending on water chemistry.

Boron – Found in agricultural regions and some groundwater basins, boron can affect crop irrigation suitability and human health at elevated levels. ATEC offers specialized solutions for boron removal, including ion exchange and selective adsorption systems.

Nitrates – A widespread contaminant in agricultural and rural areas, nitrate poses significant health risks, especially for infants. ATEC systems can incorporate ion exchange or biological denitrification modules to bring nitrate levels within compliance.

PFAS (Per- and Polyfluoroalkyl Substances) – Now officially regulated at the federal level, PFAS compounds are a top priority for water systems nationwide. ATEC's approach includes modular PFAS treatment options—such as high-efficiency adsorption media, ion exchange resin or granular activated carbon systems—integrated into full-system designs for long-term effectiveness and regulatory alignment.



CASE STUDY

Success Story: Las Lomas, CA

Client:	California Water Service (Cal Water)
Location:	Las Lomas, Monterey County, CA
Flow Rate:	350 GPM
Contaminants Treated:	Hexavalent Chromium Cr(VI), Iron, Manganese
Engineering Consultant:	Corona Environmental Consulting
Technology Provider:	A TEC Water Systems (a Cadiz Company)

In the groundwater-reliant community of Las Lomas, Cal Water turned to ATEC to tackle naturally occurring Cr(VI) ranging from 1.9 to 5.1 ppb. By retrofitting the existing iron and manganese system with ATEC's RCF technology, the project:

- **Achieved Full Compliance** – Average Cr(VI) reduced to 2.9 ppb, per the 2023 Consumer Confidence Report.
- **Avoided Service Interruptions** – Integrated into the existing plant with no downtime.
- **Delivered Long-Term Value** – Reliable, low-maintenance operation since 2016.
- **Straightforward Residuals Management** – backwash water is settled and reused for efficiency, with the remaining sludge discharged to the regional sewer system

This success illustrates ATEC's ability to meet strict regulatory requirements with practical, community-first solutions.

Partner With ATEC

Whether you're facing new Cr(VI) regulations or modernizing aging infrastructure, ATEC provides the expertise, technology, and support to deliver safe, compliant water—today and into the future.

CONTACT US

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Let ATEC design a system that delivers results for your water system.

