The Elsinore Valley Municipal Water District (E.V.M.W.D.) is located in south central California just west of Los Angeles. The District covers a service area of 96 square miles, providing water and sewer services to over 86,000 persons. The average daily water demand is 37 MGD. Of that volume, 33% is well water, 37% is imported water from other districts, and the remainder is surface water. The potential for Trihalomethane (THM) formation was from the surface water. Because of the potential for high THM formation, it was decided to evaluate CAIROX® potassium permanganate as an alternative pre-oxidant to chlorine.

**Case History**

CAIROX® potassium permanganate effectively:

- Replaced chlorine as a pre-oxidant.
- Controlled THM formation in the plant and distribution system.
- Improved floc settling, aided in coagulation, and reduced polymer usage.
- Reduced T&O complaints (musty, fishy) from 5-10 per month to 0.
- Controlled Fe/Mn episodes.

**Conclusion and Observations**

CAIROX® potassium permanganate effectively:

For further information on CAIROX® potassium permanganate product characteristics and availability, contact Carus Chemical Company at 1-800-435-6856.
LABORATORY SUPPORT

Carus Chemical Company has technical assistance available to answer questions, evaluate treatment alternatives, and perform laboratory testing. Our laboratory capabilities include; Treatability Studies, Feasibility Studies, and Analytical Services.

FIELD SERVICES

As an integral part of our technical support, Carus provides extensive on-site treatment assistance. We offer full application services, including technical expertise, supervision, testing, and feed equipment design and installation in order to accomplish a successful evaluation and/or application.

ENGINEERED SYSTEMS AND EQUIPMENT SERVICES

Standard feeders are designed specifically for CAIROX® potassium permanganate. Various options and accessories are available to meet a wide range of applications. Custom-Engineered Feed Systems are complete, pre-engineered and pre-packaged systems. They provide efficient, dust-free methods of storing, mixing, and feeding CAIROX® potassium permanganate. System designs are customized to meet specific applications and customer needs.

REFERERENCES

Ma, J., Herbert, D. Using Potassium Permanganate as a Pre-Oxidant to Reduce Disinfection By-Products, Presented at AWWA/California WEA, Fall 2000.


CARUS CHEMICAL COMPANY

During its more than 80-year history Carus’ ongoing emphasis on research and development, technical support and customer service, has enabled the company to become the world leader in permanganate, manganese, oxidation, and base-metal catalyst technologies.

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