

# Robbinsdale Plant Exceeds Water Quality Standards

The City of Robbinsdale has three (3) water treatment plants for removal of iron and manganese. The total capacity of the three plants is 7.2 million gallons per day (5,000 gpm). The plants were constructed in 1960 and were rebuilt in 1980. Recently these plants had difficulty in attaining the secondary standards of 0.30 mg/L for iron and 0.05 mg/L for manganese. Secondary standards are not health related, but are desirable for aesthetic reasons.

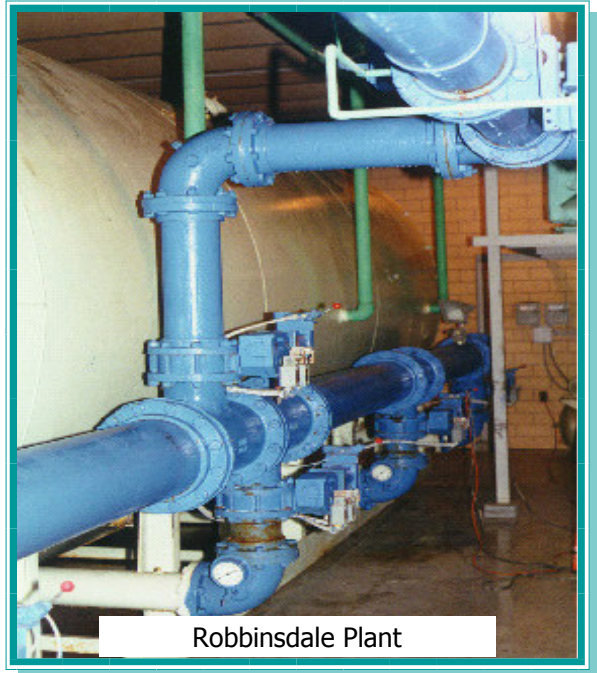
The City selected Progressive Consulting Engineers, Inc. (PCE) to analyze the three plants and recommend a course of action. PCE engineers inspected all the plants, including ultrasonic thickness testing and an evaluation of the tanks' structural integrity. An analysis showed that it was more cost effective to reconstruct the filter cells than replacing them with new ones.

A pilot plant study was completed to determine the cost effective process design. The pilot study provided the design criteria for the new filter media and the chemical feed system.

Plants No. 1, No. 2 and No. 3 were reconstructed with new dual media (anthracite and manganese greensand), airwash system, and chemical feed systems.

PCE provided design and construction observation services for the project.

All the plants are producing water, which consistently meets the secondary standards for iron and manganese.



**Client:** City of Robbinsdale  
**Client Contact:** Maria D'Andrea, City Engineer  
**Year Completed:** 1996-1997  
**Bid:** \$571,700  
**Final Cost:** \$588,805    **Change Order:** 1.02%



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