

Cooley / Engineered Membranes

WHERE CHEMISTRY MAKES ALL THE DIFFERENCE

Case Study - COOLPRO® Floating Cover

Cooley COOLPRO® reinforced polypropylene is being used to protect 200 million gallons of water in the Big Canyon Reservoir (BCR), located in Corona del Mar, California. The Big Canyon Reservoir, which serves water to Newport Beach, was built in the 1960s and is now undergoing a \$5 million rehabilitation.

The reservoir has been plagued in the past by turbidity and taste and odor problems associated with algae growth, as well as other quality complaints, which can sometimes occur in an uncovered reservoir. The rehabilitation project called for the reservoir to be fitted with a specially formulated COOLPRO® polypropylene floating cover in order to protect the water.

The COOLPRO® floating cover was fabricated from a 60-mil, 40/60-ratio polypropylene membrane, with the thicker side of the membrane being used for the underside of the cover. The reservoir was also fitted with a 45-mil polypropylene chaffer strip around its sides, which is anchored to the reservoir's concrete floor. The chaffer strip protects the cover from excessive wear due to movement of the cover as a result of fluctuating water levels. The thicker underside of the cover contributes further to this protection. This project used 1.5 million square feet of COOLPRO® between the floating cover and the chaffer strip.

Firms assisting the city of Newport Beach in this project design were Tetra Tech, Inc., the project design firm, PBS&J which supplied project inspection and administration, Hilts Consulting Group furnished oversight for the cover installation, and URS provided the necessary geotechnical services.

The cover and chaffer strip were fabricated by Colorado Lining International, Inc., located in Parker, Colorado, and installed by Comanco Environmental Corporation located in Tustin, California.

COOLPRO® is a high quality, NSF approved reinforced polypropylene geomembrane manufactured by Cooley Engineered Membranes, located in Pawtucket, Rhode Island.

COOLPRO® is engineered to withstand the harshness of the environment for very long periods. Cooley's technical team has carried out extensive study and testing on material systems involving polymers, ultraviolet inhibitors, antioxidants and pigments, and has a comprehensive knowledge database from which materials are developed. Containment and storage applications for COOLPRO® can be found in many industries including, potable and raw water, aquaculture, wastewater, agriculture, power storage and more.

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