

Industry Sector Industry Solutions Division

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Siemens to provide \$14-million water treatment system expansion for Orange County Water District

Siemens has been awarded a \$14M contract to supply a hollow fiber membrane treatment system as part of the Groundwater Replenishment System (GWR System) expansion at Orange County Water District (OCWD) in California, U.S.A. The 48-million-gallons-per-day (MGD) (182 MLD) membrane system, coupled with an existing Siemens membrane system, will increase the flow to 134 MGD (507 MLD) for the reverse osmosis (RO) membranes downstream in the GWR System. Construction could begin as early as late 2010.

“We were happy with the membrane technology in our existing system,” says Shivaji Deshmukh, GWR System Program Manager, OCWD, “and we felt that staying with this technology for the system expansion was the most efficient, cost-effective way to go.”

With more than 2.3 million inhabitants, Orange County Water District's service area is one of the most populous areas in the U.S. The GWR System, a joint project of OCWD and the Orange County Sanitation District, was established in 1997 to preserve local groundwater resources and to help form OCWD's seawater intrusion barrier. The RO pre-treatment system expansion will consist of Memcor CS membrane modules, ancillaries, control system upgrades, and associated electrical work. Siemens will supervise the membrane modules' installation and the expanded system's commissioning. At the time it was installed, the original Siemens membrane system was the largest membrane system in the Americas and one of the largest in the world. Because the System was designed for future expansion, with 20 percent extra space in the existing 26 basins, OCWD will only have to add 10 more membrane basins.

The GWR System, which has been operating since January 2008, is the world's largest water purification project of its kind. Highly treated wastewater, originally destined for the ocean, is pre-treated by Memcor submerged membrane modules at a rate of 86 MGD (325 MLD) before entering

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the RO units, followed by ultraviolet and hydrogen peroxide disinfection. The GWR System produces high quality water for less than the cost of future imported water, while using less energy and therefore fewer gas emissions than required to import water from Northern California.

Further information about solutions for water treatment is available at

<http://www.siemens.com/water>

A photo supplements this press release. Please see:

<http://www.industry.siemens.com/data/presse/pics/IIS201003262.jpg>



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