PROJECT NARRATIVE

Owner: Federal Electricity and Water Authority

Plant Name: Ghalilah Ras Al Khaimah Desalination Plant

A/E Firm: Fisia Italimpianti

Unit No. 1

Unit size: 3 MGD (million gallons per day) of pure water

Location: Ras al Kahimah, United Arab Emirates

Plant Type: Reverse osmosis desalination plant

Application: Water treatment

Contract Initiation: April 2004

Ship Date: August 2004

Operational Date: December 2004

Major System Components:

- 1 Redundant Network
- 2 Redundant Pentium Controllers
- 2 Operator Workstations (Windows)
- 1 Engineer Workstation (Windows)
- 1 eDB Historian
- RS232 - MODBUS serial interface to electrical distribution
- Ethernet TCP/IP interface to GE units in power station
- 7 Profibus DP segments to connect 63 Profibus PA field instruments and 19 Profibus PA control valves

Dual media filters at the Ghalilah Ras al Khaimah Desalination plant.

FISIA ITALIMPIANTI

Federal Electricity and Water Authority
Ghalilah Ras al Khaimah Desalination Plant
Located in Ras al Khaimah, United Arab Emirates

Like many Arab countries, the United Arab Emirates (UAE) is facing a severe water shortage caused by diminishing saline well water, the country's traditional water source, and recent droughts, which have further decimated underground water resources. Desalination facilities are proving to be a good solution to the water shortage throughout the Middle East.

In 2003, Fisia Italimpianti, one of the world's largest engineers and constructors of desalination plants, and the Federal Electricity and Water Authority of Ras al Khaimah received permission to build a series of new desalination plants.

Fisia finished its first desalination plant in the region in 2004. The Ghalilah desalination plant, online since December 2004, produces three million gallons of fresh drinking water each day. This water supply provides residents living in the areas of Khor Khowair and Shaam with a reliable, safe solution to their water requirements.

Fisia chose an Ovation® expert control system to power the Ghalilah plant. Ghalilah uses reverse osmosis comprised of three RO trains to purify the water so that it is fit for drinking. Commissioned in December 2004, the new Ovation system manages Profibus DP lines connected to field instruments in Profibus PA. This installation marks the first project where Ovation connects to Profibus DP/PA.