



Project title

Upgrade Gas Detection & SCADA Monitoring System at Ar'Rabiyah

Client

Saudi Aramco
Dhahran, Saudi Arabia

Overview:

Ar'Rabiyah compound is a newly constructed gated community, in Dhahran, Saudi Arabia. The development includes 145 residences, with wide roads and landscaped gardens to provide luxury and privacy in a much sought after, calm and prosperous residential location of Dhahran. The compound offers extensive safety and security monitoring with a control centre and radio communications network. As part of the surveillance system, environmental sensors are installed at each residence to detect potential gas emissions. Data is reported 24/7 in real-time to a central SCADA control room.

The ENVIRADA communications business, [ELPRO Technologies](#) worked closely with our local partners – [Abdul Rahman Al-Otaishan & Sons Group Co LLC](#), to provide a detailed radio path network design and computer simulations to confirm reliable radio communications from all sites. The ELPRO radios are now being specified into tender contracts for installation by our local partner. While this initial project involved supply of 145 units, the end client [Saudi Aramco](#) is planning to construct additional luxury communities and ELPRO products are well placed to support the monitoring and security programs.

Features:

- Environmental sensors and communications unit at each residence
- ELPRO Technologies Radio Modems – model [Condor 415U-2-C3](#)
- Freq range 340-400 MHz, 64-QAM, Licensed IP Radio
- Promesh wireless networking
- Industrial Protocols: DNP3, Modbus, MQTT SpB



Outcomes:

ELPRO provided a complete design and specification for the communications network to ensure robust and reliable operation in the harsh Middle East environment.



The remote monitoring stations at each of the 145 residences improve safety and security for the community.