

BMS

United Arab Emirates:

Habshan to Fujairah Crude Oil Pipe Line Service Buildings HVAC Control System
Scope of Work: Design, Supply, Installation Supervision, and Commissioning of Twenty-Two HVAC
Control System and Instrumentation for the 22 buildings servicing the 400km pipeline.
Solution: Redundant Siemens S7-300 (Software Redundancy), WinCC SCADA System, and Siemens
Instrumentation System
Location: Sweihan & Fujairah, United Arab Emirates
Client: ADCO

Kingdom of Saudi Arabia:

Medical Evacuation Center BMS at King Khalid International Airport and Salbouk Air Base

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Building Management System 27 buildings at KKI Airport and 33 building at Salboukh Airbase. **Solution:** Schneider Electric SmartX DDC controllers with Enterprise Server BMS software **Location:** Riyadh, Kingdom Saudi Arabia **Client:** Royal Saudi Airforce

State of Qatar:

HVAC Control System Upgrade for the product storage building

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the HVAC Control System and Instrumentation for the Product Storage Building. **Solution:** Redundant Siemens S7400H PLC System and Siemens WinCC HMI Station. **Location:** Mesied, Qatar

Client: QAFCO



OIL & GAS AND PETROCHEMICAL

United Arab Emirates:

M-Project HVAC Control System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Zone-1 HVAC electrical and control panel for electrical substation at Fujairah MOT. **Solution:** Simplex ABB PLC enclosed in an Ex-e enclosure **Location:** Abu Dhabi, UAE **Client:** ADNOC

Vapor Extraction and Collection Control System Upgrade

Scope of Work: Design, Supply, Installation, and Commissioning of upgrade of the vapor extraction and collection control system
Solution: upgrade of the Schneider Electric PLC system for process control and batch management for the vapor extraction and collection with integration with the existing Wonderware SCADA system
Location: Dubai, United Arab Emirates
Client: Total Lubricant Blending Company

Habshan to Fujairah Crude Oil Pipe Line HVAC

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of Twenty-Two HVAC Control System and Instrumentation
Solution: Redundant Siemens S7-300 (Software Redundancy), WinCC SCADA System, and Siemens Instrumentation System
Location: Sweihan & Fujairah, United Arab Emirates
Client: ADCO

Haliba & Near Haliba Early Production Facilities (EPF) Project

Scope of Work: Supply, Configuration and Programming of PLC Based Flare Control System. Solution: Rockwell Automation make Compactlogix Location: Abu Dhabi, United Arab Emirates Client: Al Dhafra Petroleum Operations Company (ADNOC)

UMM AL DALKH EARLY PRODUCTION SCHEME EPC PROJECT

Scope of Work: Design, Engineering, Manufacture, Programming, Testing, FAT and Supply of PLC based HVAC Control System. Solution: Siemens make Redundant S7 Control System with Siemens HMI System Location: Abu Dhabi, United Arab Emirates Client: ADNOC Offshore

Kingdom of Saudi Arabia:

PBR/EPDM Synthetic Rubber Process Refrigeration Control System

Scope of Work: Design, Supply, and Commissioning of PLC and HMI system. **Solution:** Redundant Siemens S7400H PLC System with local HMI and integration to the main plant DCS **Location:** Jubail, Kingdom Saudi Arabia **Client:** KEMYA – SABIC/Exxon

Poly Methyl Methacrylate (PMMA) Process Refrigeration Control System

Scope of Work: Design, Supply, and Commissioning of PLC and HMI system. **Solution:** Redundant Siemens S7400H PLC System with local HMI and integration to the main plant DCS **Location:** Jubail, Kingdom Saudi Arabia **Client:** SAMAC – SABIC/Mitsubishi Rayon

<u> Under Balanced Drilling – Phase 4</u>

Scope of Work: Design, Supply, Manufacture, Programming, Testing, FAT and Supply of Zone-2 rated PCS and ESD/FGS system. **Solution:** Redundant SIL-2 Rockwell make Control logix with 1715 IO System. **Location:** Kingdom Saudi Arabia **Client:** ARAMCO

Kingdom of Bahrain:

Non-Associated Gas Compression Facility (NCF) 1&2 Containerized Control System and LV MCC

Scope of Work: Design, Supply, and commissioning of the Containerized Control and Electrical Systems (E-House).

Solution: PCS and ESD/FGS Systems with Redundant SIL-2 Rockwell PLC System, ICONICS SCADA System, Control Room Setup, 415V LV MCC Panel, and 30KVA redundant UPS with Lead Acid Batteries (60 minutes backup) housed in 4 Nos. of modified ISO 40"HC containerized buildings. *Location:* Bahrain

Client: Tatweer Petroleum Bahrain

State of Qatar:

HVAC Control System Upgrade

Scope of Work: Design, Supply, and Commissioning of PLC and HMI system. Solution: Redundant Siemens S7400H PLC System and Siemens WinCC HMI Station, Location: Mesied, Qatar Client: QAFCO

EPIC for New Gasoline and Jet Storage Facilities in MIC - Nitrogen Generation Unit

Scope of Work: Design, Supply, Manufacture, Programming, Testing, FAT and Supply of PCS-7 and HMI system. **Solution:** Redundant Siemens SIL-3 PCS-7 System and HMI Station,

Location: Mesied, Qatar

Client: Qatar Energy

Sultanate of Oman:

Al-Baraka Water Injection Station – Containerized Control System

Scope of Work: Design, Supply, and commissioning of the Containerized Control and Electrical Systems (E-House).

Solution: Two Redundant Rockwell PLC and IO system, Network panel, and Redundant UPS with Lead Acid Batteries (30 minutes backup) housed in customized containerized buildings.

Location: Baraka Field, Oman

Client: Occidental Petroleum of Oman

Far West Gas Compression Station – Containerized Control System and LV MCC

Scope of Work: Design, Supply, and commissioning of the Containerized Control and Electrical Systems (E-House).

Solution: Redundant Rockwell PLC System with SIL II IO system, FactoryTalk View SCADA System, Control Room Setup, LV Switchgear, LV MCC Panel, and Redundant 20KVA UPS with Lead Acid Batteries (30 minutes backup) housed in two standard 40"HC containerized buildings. **Location:** Safa Field, Oman

Client: Occidental Petroleum of Oman

Al Barakah Water Injection – PLC/PESD Shelter Far West Fresh Water Injection Expansion Phase II Scope of Work: Design and Supply of ESD & F&G Control Panel Solution: Rockwell Automation ControlLogix System Location: Safa Field, Oman Client: Occidental Petroleum of Oman

MVC HCL Tanks Relocation

Scope of Work: Design and Supply of ESD & F&G Control Panel **Solution:** Rockwell Automation ControlLogix System **Location:** Mukhaizna, Oman **Client:** Occidental Mukhaizna LLC

Far West Fresh Water Injection Expansion Project – Al Barakah Development Phase I

Scope of Work: Design and Supply of ESD & F&G Control Panel **Solution:** Rockwell Automation ControlLogix System **Location:** Al Khazain, Oman **Client:** Occidental Mukhaizna LLC

K-610 Gas Lift Compressor ESD and F&G

Scope of Work: Design and Supply of ESD & F&G Control Panel **Solution:** Rockwell Automation ControlLogix System **Location:** Safa Field, Oman **Client:** Occidental Petroleum of Oman

K-610 Gas Lift Compressor Control System

Scope of Work: Design and Supply of Gas Lift Compressor Control Panel **Solution:** Rockwell Automation ControlLogix System **Location:** Safa Field, Oman **Client:** Occidental Petroleum of Oman

Safah Field Water Injection Control System

Scope of Work: Design, Supply, and Commissioning of the control panels for well water injection. **Solution:** ControlLogix System **Location:** Safa Field, Oman **Client:** Occidental Petroleum of Oman

Expansion of Liquid Handling Facility at Jalal

Scope of Work: Design, Supply, Installation, and Commissioning of the control system. Solution: ControlLogix System Location: Safa Field, Oman Client: Occidental Petroleum of Oman

PLC Control Panel for LOT-4: PCS & SGS Cabinets

Scope of Work: Design, Supply, and Commissioning of the PLC System for L-4 at Mukhaiznah field **Solution:** Rockwell Automation ControlLogix System **Location:** Mukhaizna, Oman **Client:** Occidental Mukhaizna LLC

PLC Control Panel for KGP Tie-in Area Fushaigah Field

Scope of Work: Design, Supply, and Commissioning of the PLC System for Block 62 Development **Solution:** Rockwell Automation ControlLogix System **Location:** Fushaigah, Oman **Client:** Occidental Oman Gas Company LLC

BISAT-C Production Facility – Nitrogen Generation and Air Compressor Package

Scope of Work: Design, Engineering, Programming, Panel Integration, Testing, Supply and Documentation of PCS-7 Control System **Solution:** Siemens make PCS-7 **Client:** OQ

Thuleilat Oil Well Injection (ESP) Skid

Scope of Work: Design, Engineering, Panel Integration, Supply, and Documentation of the 6 Nos. of RTU System. **Solution:** Rockwell Automation Compactlogix System

Location: Thuleilat, Oman *Client:* Occidental Oman Gas Company LLC

Republic of Iraq:

SIBA Gas Field Development Project

Scope of Work: Design, Supply, Installation, and Commissioning of the Control System for the Gas Compression Process Cooling in Addition to the Integration with the Main DCS System over Modbus TCP/IP.

Solution: Redundant Siemens S7400H PLC System in SIL2 configuration with HMI Station and Main Distribution Boards and MCC Panels. **Location:** Siba, Iraq

Client: Kuwait Energy Iraq Limited (KEIL)

EPC for Well pad 7 and CPF WI area at the West Qurna (phase 2)

Scope of Work: Design, Engineering, Supply & Commissioning of PLC based HVAC Control System for Satellite Instrument Houses Solution: Schneider make Redundant M580 Control System Location: Kurdistan, Iraq Client: Lukoil

Provision of Extended Well Test Equipment and Services

Scope of Work: Design, Engineering, Panel Integration and Supply of RTU Systems (4 Nos.) in Zone-2 rated Ex'e Enclosure. **Solution:** Rockwell Automation make Compact Logix Control System **Location:** Kurdistan, Iraq **Client:** Rosneft

Modernization of Bejil EWT Facilities (Stage 1) and Well BJ-11 Hookup

Scope of Work: Design, Engineering, Panel Integration, Testing, Supply and Commissioning of ICSS System, PAGA System, 20ft Container and UPS System Solution: Schneider make M340 for PCS and Safety M580 System for ESD/FGS. Location: Kurdistan, Iraq Client: Rosneft

Arab Republic of Egypt:

Basin 3 Liquid Gas Bulk Terminal at Sokhna Port

Scope of Work: Design, Supply, Installation, and Commissioning the control system and the integration of Bentley Nevada Vibration Monitoring System for the Boil Off Gas (BOG) Liquification and Refrigeration Packages, in addition to the Integration with Main DCS System over Modbus TCP/IP. Solution: Four Redundant Siemens S7400H PLC System with four HMI Stations and Bentley Nevada Vibration Monitoring Racks. Location: Sokhna, Egypt Client: Sonker

Turkmenistan:

LAM off-shore Platforms HVAC RTU and SCADA Upgrade

Scope of Work: Programming and commissioning of 4 off-shore platforms HVAC RTU and the supply of Cimplicity SCADA system.

Solution: programming and configuration of King fisher RTUs (4) with the supply and programming of GE Cimplicity SCADA and the integration of HIMA ESD system.

Location: Turkmenistan *Client:* Dragon Oil

<u>Nigeria:</u>

Ajaokuta Kaduna Kano Gas Pipeline Project

Scope of Work: Design, Engineering, Manufacture, Programming, Testing, FAT and Supply of Metering Control System. **Solution:** Emerson make Flobos S600+, Siemens make Redundant S7 PLC System and Siemens WINCC SCADA System. **Location:** Nigeria

Client: Nigeria National Petroleum Corporation



CONDITION MONITORING SYSTEMS

United Arab Emirates:

Dubai Investment Park Pump Station 1 Condition Monitoring System

Scope of Work: Design, Supply, Installation, and Commissioning of the Online Condition (Vibration & Temperature) Monitoring and Protection System for 8 potable water pumps
Solution: Rockwell Automation Dynamix 144 Vibration Modules on ControlLogix processor, Flex RTD Modules, E-Monitor Vibration Analysis and Diagnostics software, Hansford vibration sensors, and Integration with Rockwell Automation SCADA System
Location: Dubai, UAE
Client: Dubai Electricity and Water Authority

Najma Pump Station 2 Condition Monitoring System

Scope of Work: Design, Supply, Installation, and Commissioning of the Online Condition (Vibration & Temperature) Monitoring and Protection System for 8 potable water pumps **Solution:** Rockwell Automation Dynamix 144 Vibration Modules on ControlLogix processor, Flex RTD Modules, E-Monitor Vibration Analysis and Diagnostics software, Hansford vibration sensors, and Integration with Schneider SCADA System. **Location:** Dubai, UAE

Client: Dubai Electricity and Water Authority

Jabel Ali Sewage Treatment Plant Phase 2 Condition Monitoring System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Condition (Vibration & Temperature) Monitoring System for Six Effluent Pumps

Solution: Rockwell Automation Dynamix 1444 Vibration Modules on CompactLogix processor, CompactLogix RTD Modules, Hansford vibration sensors, and Integration with ABB DCS **Location:** Dubai, United Arab Emirates **Client:** Dubai Municipality

Jebal Ali RO Plant HP Pumps Condition Monitoring System Retrofit

Scope of Work: Retrofit of the existing Condition Monitoring System including the configuration, analysis the vibration measurement issues, and tuning of the Rockwell Automation vibration modules (XM 120/XM 124) installed for the vibration measurement of RO train HP pumps.
Solution: Rockwell Automation XM Vibration Modules, Hansford sensor, and Integration with Rockwell Automation SCADA System
Location: Dubai, United Arab Emirates
Client: Dubai Electricity & Water Authority (DEWA)

Kingdom of Saudi Arabia:

Ras Al-Khair Sea Water Pump Station Condition Monitoring System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Online Condition (Vibration & Temperature) Monitoring and Protection System for four 3MW Sea Water Intake Pumps **Solution:** Rockwell Automation XM Vibration Modules, CompactLogix RTD Modules, E-Monitor Vibration Analysis and Diagnostics software, and Integration with Rockwell Automation SCADA System **Location:** Ras Al Khair, Kingdom Saudi Arabia **Client:** Royal Commission

King Saud University Chiller Plant Condition Monitoring System

Scope of Work: Design, Supply, Installation, and Commissioning of the Condition (Vibration) Monitoring System for seven chilled water distribution pumps **Solution:** Rockwell Automation Dynamix 1444 Vibration Modules, Bentley Nevada Sensors, and Integration with Rockwell Automation SCADA System **Location:** Riyadh, Kingdom Saudi Arabia **Client:** King Saud University

PBR & EPDM Synthetic Rubber Refrigeration Compressors Condition Monitoring System

Scope of Work: Design, Panel Integration, and Commissioning of the Condition Monitoring System for Refrigeration Compressors
Solution: Bentley Nevada 3500
Location: Jubail, Kingdom Saudi Arabia
Client: Refrigeration Engineering International - KEMYA (SABIC/ExxonMobil)

Poly Methyl Methacrylate Refrigeration Compressors Condition Monitoring System

Scope of Work: Design, Panel Integration, and Commissioning of the Condition Monitoring System for Refrigeration Compressors
Solution: Bentley Nevada 3500
Location: Jubail, Kingdom Saudi Arabia
Client: Refrigeration Engineering International - SAMAC (SABIC / Mitsubishi Rayon)

Shoaiba-Mina Water Transmission System

Scope of Work: Testing and Commissioning of the Condition (Vibration) Monitoring System for 6 Main Desalination Water Pumps (11MW) and 6 Booster pumps (8MW) at Mina Pump Station **Solution:** Bentley Nevada 3500 **Location:** Jeddah, Kingdom Saudi Arabia **Client:** SWCC

Sultanate of Oman:

Salalah LPG Project Condition Monitoring System

Scope of Work: Testing and Commissioning of the Condition (Vibration) Monitoring System LPG Plant Refrigeration Compressors **Solution:** Bentley Nevada 3500 **Location:** Dhofar, Oman **Client:** Oman Gas

Arab Republic of Egypt:

Basin 3 Liquid Gas Bulk Terminal at Sokhna Port

Scope of Work: Design, Panel Integration, and Commissioning of the Condition Monitoring System for Gas Liquefaction and Refrigeration Compressors Solution: Bentley Nevada 3500 Location: Sokhna Port, Egypt Client: Refrigeration Engineering International – Sonker Energy

Vibration Analysis and Diagnostics Software

Scope of Work: Supply, Installation, Configuration of Vibration Analysis and Diagnostics Software Solution: Rockwell Automation vibration modules (XM 120/XM 124) with E-Monitor Vibration Analysis & Diagnostic Software Location: Damietta, Egypt Client: Spanish Egyptian Gas Co. S.A.E (SEGAS)



DISTRICT COOLING PLANTS

United Arab Emirates:

SeaWorld District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system for the Process and the building services in addition to the SIL-3 ESD system to allow for the unmanned operation of the Plant.

Solution: Redundant Rockwell Automation ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, FactoryTalk Historian System with VantagePoint Reporting, SIL-3 S7400 Siemens Controllers with FS IOs for the ESD system and E+H Instrumentation system Location: Abu Dhabi, United Arab Emirates Client: Tabreed

Danat District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Siemens S7400H PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, FactoryTalk Historian System with VantagePoint Reporting, and E+H Instrumentation system

Location: Abu Dhabi, United Arab Emirates Client: PAL Cooling

First District Cooling Plant Expansion and Upgrade in Al Reem Island

Scope of Work: Upgrade the 2009-installed Rockwell Redundant ControlLogix PLC with ControlNet IO network to the latest Redundant PLC on Ethernet/IP IO network.in addition to the supply and installation of the instrumentation, IO capacity, for the newly installed chillers, pumps, and TES tanks and integration in the PLC logic, SCADA graphics, historian, and reporting.

Solution: replace the legacy 1756-L6x controller, ENBT, CNBR, SRM modules with 1756-L7x Controller, EN2TR, and RM modules and change all IO racks communication modules to be on Ethernet IP. Install new RIO panels based on 1794 Flex IOs to accommodate the newly installed equipment and TES tanks and the associated instruments from E+H. Integration of the new IOs with the redundant FactoryTalk SCADA system, FactoryTalk Historian and VantagePoint Reporting.

Location: Abu Dhabi, UAE

Client: PAL Cooling

Shams District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Siemens S7400H PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, FactoryTalk Historian System with VantagePoint Reporting, and E+H Instrumentation system

Location: Abu Dhabi, United Arab Emirates Client: PAL Cooling

Jumeirah Village Circle (JVC) District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Siemens S7400H PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, FactoryTalk Historian System with Reporting, and E+H Instrumentation system

Location: Dubai, United Arab Emirates **Client:** Empower

Mirdiff Main District Cooling Plant Controls Upgrade

Scope of Work: Design, Supply, Installation, and Commissioning of the control system upgrade. Solution: Allen-Bradley CompactLogix PLC System; Rockwell Automation FactoryTalk View Site Edition SCADA System, and E+H Instrumentation system Location: Dubai, United Arab Emirates **Client:** Empower

Abu Dhabi Airport District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system. Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation

FactoryTalk View Site Edition SCADA System, and Siemens/E+H Instrumentation system Location: Abu Dhabi, United Arab Emirates

Client: Abu Dhabi Airports Company

Warsan Village District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System. Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system. Location: Dubai, United Arab Emirates **Client:** Nakheel

Dubai Creek Harbour Development District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.

Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system. Location: Dubai, United Arab Emirates

Client: EMAAR

Jumeirah Lake Towers District Cooling Plant 1

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system replacing the existing obsolete control system. Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, FactoryTalk Historian System with Reporting, and Siemens Instrumentation system

Location: Dubai, United Arab Emirates **Client:** Empower

Dubai Metro Green Line District Cooling Plants 10 & 11

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system Location: Dubai, United Arab Emirates **Client:** Tabreed

Palm Jumeirah Crescent District Cooling Plant 4 Controls Upgrade

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system replacing the existing obsolete control system. Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, FactoryTalk Historian System with Reporting, and Siemens Instrumentation system

Location: Dubai, United Arab Emirates **Client:** Empower

Saadiat Island District Cooling Plant DCP4

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Siemens/E+H Instrumentation system Location: Abu Dhabi, United Arab Emirates **Client:** PAL Technology

Saraya Abu Dhabi Cornish District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Siemens/E+H Instrumentation system *Location:* Abu Dhabi, United Arab Emirates *Client:* PAL Technology

ADNEC Capital Center District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system Location: Abu Dhabi, United Arab Emirates

Client: PAL Technology

Shams Abu Dhabi Modular District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system. Solution: Siemens S7-300 PLC System; Redundant WinCC SCADA System, and Endress-Hauser Instrumentation system Location: Abu Dhabi, United Arab Emirates **Client:** PAL Technology

Dragon Mart Modular District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system. Solution: Siemens S7-400 PLC System; Redundant WinCC SCADA System, and Endress-Hauser Instrumentation system Location: Dubai, United Arab Emirates Client: Nakheel

Baynoona District Cooling Plant Expansion

Scope of Work: Design, Supply, Installation Supervision, Commissioning, and Integration of the Additional Controls and Instrumentation Components Required for the New Equipment Installed in the Plant.

Solution: GE RX3i PLC System Expansion; Integration with Cimplicity SCADA System, and Endress-Hauser Instrumentation system

Location: Abu Dhabi, United Arab Emirates Client: Tabreed

UAE University District Cooling Plant Expansion

Scope of Work: Design, Supply, Installation Supervision, Commissioning, and Integration of the Additional Controls and Instrumentation Components Required for the newly-installed equipment. Solution: Redundant Allen-Bradley ControlLogix PLC System expansion; integration with Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system

Location: Al-Ain, United Arab Emirates Client: Tabreed

Strategic Tunnel Enhancement Program Phase 1

Scope of Work: Design, Supply, Installation Supervision, and commissioning of the PLC and HMI system for the tunnel HVAC

Solution: Allen-Bradley CompactLogix PLC System and HMI Location: Abu Dhabi, United Arab Emirates Client: Samsung

YAS Island District Cooling Plant Expansion

Scope of Work: Design, Supply, Installation Supervision, Commissioning, and Integration of the Additional Controls and Instrumentation Components Required for the New Equipment Installed in the Plant.

Solution: Redundant Allen-Bradley ControlLogix PLC System expansion; integration with Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system

Location: Yas Island, United Arab Emirates **Client:** Tabreed

Golf Gardens District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Allen-Bradley CompactLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system Location: Abu Dhabi, United Arab Emirates Client: Sorrouh

Raihan Heights District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system Location: Abu Dhabi, United Arab Emirates

Client: Capitala

Zayed University District Cooling Plants 1 & 2

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.
Solution: Allen-Bradley CompactLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system
Location: Abu Dhabi, United Arab Emirates
Client: Zayed University

Pearl of the Emirates District Cooling Plant 1 (DCP1)

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system **Location:** Abu Dhabi, United Arab Emirates

Client: PAL Technology

Dubai Investment Park District Cooling Plant 3 (DIP3)

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system **Location:** Dubai, United Arab Emirates **Client:** Emicool

Reef District Cooling Plant

Scope of Work: Provide 3rd Party commissioning Management Services.

Solution: Prepare Commissioning Plan, Procedures, and Documentation; Coordination with Equipment Vendors, Manage the Commissioning Activities, Witness and Verify the Commissioning of all Plant Equipment; Carry out the Plant Performance Tests; Administer the Operation Training, and Manage the Plant Handover to the Client

Location: Abu Dhabi, United Arab Emirates *Client:* Manazel

YAS Island District Cooling Plant

Scope of Work: Provide 3rd Party commissioning Management Services.

Solution: Prepare Commissioning Plan, Procedures, and Documentation; Coordination with Equipment Vendors, Manage the Commissioning Activities, Witness and Verify the Commissioning of all Plant Equipment; Administer the Operation Training, and Manage the Plant Handover to the Client **Location:** Abu Dhabi, United Arab Emirates

Client: Tabreed

Jumeirah Crescent District Cooling Plants

Scope of Work: Provide 3rd Party commissioning Management Services.

Solution: Prepare Commissioning Plan, Procedures, and Documentation; Coordination with Equipment Vendors, Manage the Commissioning Activities, Witness and Verify the commissioning of all Plant Equipment; Administer the Operation Training, and Manage the Plant Handover to the Client **Location:** Dubai, United Arab Emirates **Client:** Palm District Cooling

Jumeirah Lake Towers District Cooling Plants

Scope of Work: Provide 3rd Party commissioning Management Services.

Solution: Prepare Commissioning Plan, Procedures, and Documentation; Coordination with Equipment Vendors, Manage the Commissioning Activities, Witness and Verify the Commissioning of all Plant Equipment; Administer the Operation Training, and Manage the Plant Handover to the Client **Location:** Dubai, United Arab Emirates **Client:** Palm District Cooling

Kingdom of Saudi Arabia:

Mohammad Bin Salman Foundation (MiSK) District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.
Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system.
Location: Riyadh, Kingdom Saudi Arabia
Client: Mohammad Bin Salman Foundation

Neom Development Central Utility Complex 2

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the DCS-based Control System.

Solution: Schneider Electric EcoStruxure Hybrid DCS (PlantStruxure PES) **Location:** Tabouk Province, Kingdom Saudi Arabia **Client:** Neom

TIR-1110 DCP in Community Area, Al Jubail

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System. **Solution:** Redundant Honeywell MasterLogic redundant PLC System; Redundant PlantCruise Server-Client, Historian with Reporting, and Endress-Hauser Instrumentation system. **Location:** Al Jubail, Kingdom Saudi Arabia

Client: Royal Commission for Jubail & Yanbu

Neom Development Central Utility Complex 1

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the DCS-based Control System.

Solution: Schneider Electric EcoStruxure Hybrid DCS (PlantStruxure PES) **Location:** Tabouk Province, Kingdom Saudi Arabia **Client:** Neom

Government Agencies Compound District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.

Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system. **Location:** Riyadh, Kingdom Saudi Arabia

Client: Ministry of Finance

Madina Hajj City District Cooling Plants

Scope of Work: Design, Supply, Installation supervision, and Commissioning of the Integrated PLC, SCADA, and Instrumentation System for the Development Infrastructure Including District Cooling Plants & ETS, Grey Water & irrigation Pumping Stations, Tunnel Ventilation System, and Central Command & Control Center.

Solution: Redundant Rockwell ControlLogix PLC systems; Redundant SCADA Client-server system; Redundant Historian System with Reporting; and E+H Instrumentation **Location:** Al Madinah Al-Munawara, Kingdom Saudi Arabia **Client:** Ministry of Finance

King Saud University Endowment Central Utility Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system. **Solution:** Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and ABB Instrumentation system **Location:** Riyadh, Kingdom Saudi Arabia **Client:** King Saud University

King Fahd Hospital Modular Chiller Plant Control System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated PLC, and SCADA system. **Solution:** Allen-Bradley CompactLogix PLC System; Rockwell Automation FactoryTalk View Site Edition SCADA System **Location:** Jizan, Kingdom Saudi Arabia **Client:** Stellar Energy

King Saud University Campus District Cooling Plant

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Endress-Hauser Instrumentation system **Location:** Riyadh, Kingdom Saudi Arabia **Client:** King Saud University

King Abdul Aziz International Airport – Cooling Tower Local Control Panel

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the local PLC & VFD control panels for the cooling tower. Solution: Siemens S7-1200 PLC System and I/Os. Location: Jeddah, Kingdom Saudi Arabia Client: King Abdul Aziz International Airport

State of Qatar:

Lusail Marina District Cooling Plant - Lusail City Development

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.

Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system **Location:** Doha, Qatar **Client:** Marafeq Qatar

Lusail Wadi District Cooling Plant - Lusail City Development

Scope of Work: Design, Supply, Installation, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.

Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system

Location: Doha, Qatar

Client: Marafeq Qatar



METALS

Emirates Aluminum Phase I – Plant-wide SCADA Integration

Scope of Work: The Integration of all Sub-systems Supplied by OEM Plant-wide into a 3 Central SCADA Systems.
Solution: Allen-Bradley ControlLogix and CompactLogix PLC Systems, Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and FactoryTalk Historian.
Location: Abu Dhabi, United Arab Emirates
Client: Emirates Global Aluminium (EGA)

Emirates Aluminum Phase II - Controls, Instrumentation, SCADA POV & Integration

Scope of Work: The Integration of all Sub-systems Supplied by OEM Plant-wide into a 3 Central SCADA Systems.

Solution: Allen-Bradley ControlLogix and CompactLogix PLC Systems, Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and FactoryTalk Historian.

Location: Abu Dhabi, United Arab Emirates

Client: Emirates Global Aluminium (EGA)

Automatic Anode Tracking Crane Positioning

Scope of Work: Design, Supply, Installation, and Commissioning of the Automatic Anode Tracking and Crane Position Including Position Encoders and RFID Recognition with the Integration with the Existing Crane Control System and the Existing Central SCADA, Historian and Reporting System. new SCADA & Historian hardware and software with additional instrumentation.

Solution: Rockwell Automation CompactLogix and Integration with FactoryTalk View Client-Server with redundant Servers and FactoryTalk Historian System with VantagePoint Reporting.

Location: Dubai, United Arab Emirates

Client: Emirates Global Aluminium (EGA)

Boilers Controls Retrofit for the Combined Cycle Power Plant

Scope of Work: Design, Supply, Installation, and commissioning of the Control Upgrade of the 8 Combined Cycle Turbine's Boiler Damper Positioners. Solution: GE PLC with Acromag Signal Splitters and Siemens Pneumatic Positioners. Location: Dubai, United Arab Emirates Client: Dubai Aluminum

Fume Treatment System Control Upgrade

Scope of Work: Upgrade and Integration of the Fume Analyzer. Solution: Allen-Bradley ControlLogix PLC System with Prosoft ASCII Communication Module, Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System. Location: Dubai, United Arab Emirates Client: Dubai Aluminum

Desalination Plant SCADA Retrofit

Scope of Work: Provide Redundant SCADA Stand-alone Stations for the Desalination Plant **Solution:** Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System. **Location:** Dubai, United Arab Emirates **Client:** Dubai Aluminum

UPS & Server Temperature Monitoring

Scope of Work: Design, Supply, Installation, and Commissioning of the Integrated Instrumentation, PLC, HMI, and Integration with the Plant SCADA System for Server Room Temperature Monitoring and UPS Monitoring.

Solution: Allen-Bradley CompactLogix PLC System and HMI. **Location:** Abu Dhabi, United Arab Emirates **Client:** Emirates Aluminum

SCADA System Expansion

Scope of Work: Design, Supply, Installation, and Commissioning of 72" SCADA Clients in Different Locations of the Plant. **Solution:** Rockwell Automation FactoryTalk View Site Edition SCADA Clients **Location:** Abu Dhabi, United Arab Emirates **Client:** Emirates Aluminum



TURBINE INLET COOLING PLANTS

Kingdom of Saudi Arabia:

Qurayyah Independent Power Plant Turbine Inlet Air Chilling (TIAC)

Scope of Work: Design, Supply, and Commissioning of the Integrated Instrumentation, PLC, and HMI system and Integration with the Plant DCS. Solution: Redundant Siemens S7400H PLC System; Siemens WinCC HMI Station, and Endress-Hauser Instrumentation system Location: Dammam, Kingdom Saudi Arabia Client: Hajir Electricity

Republic of Iraq:

Khor Al-Zubair Power Plant Turbine Inlet Air Chilling (TIAC)

Scope of Work: Design, Supply, Installation supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA system.

Solution: Redundant Allen-Bradley ControlLogix PLC System; Redundant Rockwell Automation FactoryTalk View Site Edition SCADA System, and Siemens/E+H Instrumentation system **Location:** Khor Al-Zubair, Republic of Iraq **Client:** Ministry of Electricity



PROJECT REFERENCES ELECTRICAL SCADA & PMS

State of Palestine:

Central Command and Control Center for Palestine Electricity Transmission Limited

Scope of Work: Design, Supply, Installation, and Commissioning of a Central Command and Control Center for the Electrical Generation and Distribution for the West Bank, Palestine. This Phase Include the Servers and Workstations and the Integration of 4 Substations. **Solution:** ETAP Real-Time Software with Historian, Reporting, and Analysis

Location: ETAP Real-Time Software with Historian, Reporting, and Analysis **Location:** Ramallah, Palestine **Client:** Palestine Electricity Transmission Limited

Central Command and Control Center for Palestine Electricity Transmission Limited Phase II

Scope of Work: Design, Supply, Installation, and Commissioning of the Distribution Management System (DMS). Solution: ETAP DMS system Location: Ramallah, Palestine Client: Palestine Electricity Transmission Limited

Kingdom of Saudi Arabia:

Light Pole Monitoring and Control System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Light Pole RTU panel and Central Control Panel for monitoring and control. Solution: Acromag Ethernet I/O with Fiber Optic Connectivity and Location: Jeddah, Kingdom Saudi Arabia Client: Ministry of Defense & Aviation

SRF Island HV Switchgear SCADA

Scope of Work: Design, Supply, Installation, and Commissioning of the Electrical System SCADA System

Solution: Acromag Modbus TCP I/Os with FactoryTalk View and Kepware OPC server **Location:** Jeddah, Kingdom Saudi Arabia **Client:** Ministry of Defense & Aviation



WATER & WASTEWATER

United Arab Emirates:

Khuraijah Reservoir Control & Monitoring System

Scope of Work: Design, Supply, Programming, Installation supervision, Testing, and Commissioning of control system for the Khuraija 9-tank Reservoir. **Solution:** Redundant Schneider Electric M580 PLC and associated IOs with simplex EcoStruxure SCADA and integration with the main pumping station DCS **Location:** Khuraija, RAK **Client:** Etihad Water & Electricity (FEWA)

Sharjah Municipality Integrated Control System & VFD for Odor Control Unit

Scope of Work: Design, Supply, Programming, Installation, Testing, and Commissioning of Odor Control Unit integrated control system and VFD for the Main Sewage Pump Station3. **Solution:** Simplex Siemens Siplus S7-1200 PLC & IOs with 15" HMI and ABB VFDs. **Location:** Sharjah Industrial Area **Client:** Sharjah Municipality

SCADA Upgrade at Kalba Desalination Plant

Scope of Work: Client-Server SCADA system hardware and software upgrade Solution: provide a new set of IT hardware (servers & workstations) with the upgrade of the existing Siemens WinCC redundant client-server SCADA V6.2 to V7.5 Location: Kalba, Sharjah Client: Sharjah Electricity and Water Authority (SEWA)

Um Al Quwain Pumping Station Control System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Redundant PLC and SCADA Control System. **Solution:** Redundant Siemens S7-1500 PLC System with stand-alone WinCC SCADA System. **Location:** Um Al Quwain, UAE **Client:** Etihad Water and Electricity (FEWA)

IWPP Pumping Station 1 Control System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Redundant PLC and SCADA Control System. **Solution:** Redundant Siemens S7-1500 PLC System with stand-alone WinCC SCADA System. **Location:** RAK, UAE **Client:** Etihad Water and Electricity (FEWA)

Kingdom of Saudi Arabia:

Ras Al-Khair Sea Water Pipeline

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of 3 redundant PLC systems along the rout of the sea water distribution pipeline with the integration with the seawater intake pump station SCADA, Historian, and Asset Management.

Solution: Rockwell Automation redundant ControlLogix for with the Integration with Rockwell Automation SCADA System installed in the pumping station.

Location: Ras Al Khair, Kingdom Saudi Arabia **Client:** Royal Commission

Neom Circular City Water Storage Reservoir PLC & SCADA System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the 3 Redundant PLC systems and 4 simplex RTU for the east and west reservoir and tanker filling station with central redundant client-server SCADA System at each reservoir locations. **Solution:** Redundant Siemens S7-1500 with WinCC Citect based SCADA and historian. **Location:** Tabouk Province, Kingdom Saudi Arabia **Client:** Neom

Al Zahraa Pumping Station Control System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Redundant PLC and SCADA Control System.

Solution: Redundant Siemens S7-1500 PLC System with redundant Client-server WinCC SCADA System. **Location:** Jeddah, Kingdom Saudi Arabia

Client: Jeddah Municipality

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Jeddah Economic City Phase-1 Infrastructure

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Redundant PLC systems for storm, irrigation, sewage, and domestic water pumping stations with central redundant client-server for all four pumping stations. **Solution:** Redundant Schneider Electric M580 with ClearSCADA based SCADA and historian.

Solution: Redundant Schneider Electric M580 with ClearSCADA based SCADA and historian. *Location:* Jeddah, Kingdom Saudi Arabia *Client:* Jeddah Economic Company

Neom Water Transmission System

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the 12 Redundant PLC systems with central redundant client-server SCADA System.

Solution: Redundant Schneider Electric M580 with Vijeo Citect based SCADA and historian. **Location:** Tabouk Province, Kingdom Saudi Arabia **Client:** Neom

Medical Evacuation Center SCADA at King Khalid International Airport and Salbouk Air Base

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the 4 redundant PLC systems and 3 simplex RTU systems for different utilities and pumping stations at the King Khalid International Airport and Salboukh Airbase redundant client-server SCADA System at each location. **Solution:** Redundant Schneider Electric M580 with Vijeo Citect based SCADA and historian **Location:** Riyadh, Kingdom Saudi Arabia **Client:** Royal Saudi Airforce

097-C73R Jubail Infrastructure Pumping Stations (Sewage, Potable, Lift)

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.

Solution: Honeywell ControlEdge PLC System; Honeywell Experion SCADA, and Endress-Hauser Instrumentation system.

Location: Al Jubail, Kingdom Saudi Arabia Client: Royal Commission for Jubail & Yanbu

<u>Government Agencies Compound Infrastructure & Utility (Grey Water, Drainage, Sewage, & Irrigation)</u>

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the Integrated Instrumentation, PLC, and SCADA System.

Solution: Redundant Siemens S7400H PLC System; Redundant Siemens WinCC Server-Client, Historian with Reporting, and Siemens and Endress-Hauser Instrumentation system.

Location: Riyadh, Kingdom Saudi Arabia

Client: Ministry of Finance

Madina Hajj City Infrastructure & Utility (Grey Water, Drainage, Sewage, & Irrigation)

Scope of Work: Design, Supply, Installation supervision, and Commissioning of the Integrated PLC, SCADA, and Instrumentation System for the Development Infrastructure Including District Cooling Plants & ETS, Grey Water & irrigation Pumping Stations, Tunnel Ventilation System, and Central Command & Control Center.

Solution: Redundant Rockwell ControlLogix PLC systems; Redundant SCADA Client-server system; Redundant Historian System with Reporting; and E+H Instrumentation **Location:** Al Madinah Al-Munawara, Kingdom Saudi Arabia **Client:** Ministry of Finance

Ras Al-Khair Sea Water Pump Station

Scope of Work: Design, Supply, Installation Supervision, and Commissioning of the integrated PLC, SCADA, Historian, Asset Management, Telecom, and Online Condition Monitoring System for Intake Seawater pumping station.

Solution: Rockwell Automation Redundant ControlLogix for pump control, hypo chlorination, and electrical switchgear. In addition to CompactLogix PLC for vibration monitoring system, with Rockwell Automation Client-server FactoryTalk SE SCADA System and Rockwell Asset Center.

Location: Ras Al Khair, Kingdom Saudi Arabia Client: Royal Commission

State of Qatar:

Lusail RO - Lusail City Development

Scope of Work: Design, Supply, Installation, and Commissioning of the Integrated Instrumentation, PLC, and integration with the existing SCADA System.

Solution: Simplex Siemens S7-1500PLC System; integration with Redundant Siemens WinCC Server-Client, Historian and Reporting, and Siemens and Endress-Hauser Instrumentation system **Location:** Doha, Qatar **Client:** Marafeg Qatar

Arab Republic of Yemen:

District of Dhamar Water Reservoir and Network Control & Monitoring System – Phase 1

Scope of Work: Design, Supply, Installation supervision, and Commissioning of the electrical and control system for the water pumping (VFDs) from water wells distributed around the district of Dhamar to the district's central reservoir. Central SCADA system for monitoring and control of the district's water network in the over GPRS network, and Instrumentation.

Solution: Siemens VFD and S7-1500 PLC system with WinCC SCADA and E+H instrumentation **Location:** Dhamar, Yemen

Client: UNICEF/ Ministry of Water - The Republic of Yemen

Germany:

STA Separators for Automotive Engine Production Process Wastewater

Scope of Work: Design, Programming, and Commissioning of the PLC & HMI System Solution: Siemens Fail Safe PLC S7-317F-2 PN/DP, Siemens HMI, Profinet IO, Location: Landshut, Germany Client: BMW AG

<u>Taiwan:</u>

Novoflow Ultra-filtration System for Latex-Process Wastewater

Scope of Work: Design, Programming, and Commissioning of the PLC & HMI System Solution: Siemens IM151-8 CPU, Siemens HMI Location: Hsinchu, Taiwan Client: Croslene Chemical Industries, LTD