

AQUILA M. FIELDS
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EDUCATION

University of Illinois Urbana-Champaign - B.S. Mechanical Engineering 1995

EXPERIENCE

Independent Contractor / Chicago, Illinois (2020 – Present)

Provide general construction services for residential clients including sub-floor and ceramic/linoleum floor tile demo/install, kitchen/bathroom cabinet demo/install, wall tile demo/install, appliance install (light fixtures, toilets, sinks, etc.), baseboard install, interior paint and drywall repair. (2020 – Present)

Sargent & Lundy LLC. / Chicago, Illinois (2006 – 2019)

Project Associate I Instrumentation and Controls Associate, responsibilities include the detailed design and management of Fossil and Nuclear Power projects, perform specific tasks covering the application, design, specification, procurement, installation, interface, operation and performance of instrumentation and control systems.

Performed engineering for domestic and international clients, including the following:

Wisconsin Power and Light Co. / Columbia Unit 2

I&C Lead Engineer for Andritz based Selective Catalytic Reduction (SCR) system for Unit:2. (2015 - 2019)

Xcel Energy / Hayden Fossil Power Plant

Owner's Engineer for I&C design and interface of Hitachi based Selective Catalytic Reduction (SCR) system for two coal fired units. Developed distributed control system (DCS) procurement/services specification, controls schedule, General Work Contract (GWC), I/O and instrument database. Reviewed P&IDs, instrument specifications, instrument locations, conceptual HMI graphic screens, vendor drawings, and made modifications for construction approval. Prepared cost estimates and BOMs. Participated in hardware and software Factory Acceptance Test (FAT) and sign-off for Invensys DCS. (2013 - 2016)

Xcel Energy / Pawnee Fossil Power Plant

I&C design and interface of B&W based Flue Gas Desulphurization (FGD) and Selective Catalytic Reduction (SCR) system for two coal fired units. Develop GWC, reviewed P&IDs, instrument specifications, instrument locations, conceptual HMI graphic screens, and vendor drawings, Review new design including new Howden axial ID fans for NFPA 85 compliance. (2013 - 2014)

NV Energy / North Valmy Fossil Power Plant

Owner's Engineer for control and interface of NoITec based Dry Sorbent Injection (DSI) system to control stack HCL for Unit 1. Prepared EPC specification for control system, review vendor design inputs, attend FAT and provide onsite construction support. (2014)

Owner's Engineer for control and interface of vendor's electro-deionization (EDI) equipment to produce demineralized water makeup. Prepared EPC specification, BOP instrument datasheets and installation details, design integration of existing control systems and develop demolition scope for replacement of existing mixed bed demineralizers. (2012 - 2013)

NV Energy | Chuck Lenzie Combined Cycle Power Station

Acted as Owner's Engineer for the upgrade of existing instrument/service air compressor controls. Upgrade consists of adding remote control/monitor of existing skids via RS485 datalink to Owner's DCS. Provided on-site support during construction activities. (2013)

Constellation Energy | Calvert Cliffs Nuclear Power Plant

Prepared Total Loop Uncertainty (TLU) analysis for the control room indication loop for Containment Sump Pool Temperature monitoring. Calculation was performed in response to Generic Safety Issue: GSI-191, LOCA Generated Debris and Head Loss due to chemical precipitant accurnulation in the Containment Sump. (2012)

Exelon Corporation | Peach Bottom Nuclear Power Plant

Prepared TLU analysis for several loops to be used in performance testing of Turbine Controls Upgrade. (2012)

South Texas Project (STP) Electric Generating Station 3 & 4 Nuclear Power Project

Acted as design supervisor and mentor to 10-12 associate engineers for new Units 3 & 4. Responsible for review of Balance of Plant (BOP) and vendor Logic Diagrams, I/O Lists, System Design Descriptions (SDD), Master Diagrams, instrument specification, Bills of Material (BOM), schematic/wiring diagram, and P&IDs. Responsible for adherence to project training, procedural requirements, and document exchange procedures. (2009 - 2011)

Basin Electric Power Cooperative

I&C engineering, design, and construction support for new combined cycle power plant with Alstom steam turbine, Nooter Erikson HRSG, GE combustion turbine, and Emerson Ovation control system. (2009)

Ameren Illinois | Duck Creek, Coffeen, and Sioux Fossil Power Projects

Acted as Owner's Engineer for I&C design and interface of Hitachi based Wet Flue Gas Desulphurization (WFGD) upgrades for six coal fired units. Created BOP logic diagrams, developed and managed I/O database (Microsoft Access) and instrument database. Reviewed P&IDs, instrument specifications, instrument locations, conceptual HMI graphic screens, vendor drawings, and made modifications for construction approval. Prepared cost estimates and BOMs. Participated in Factory Acceptance Test (FAT) and sign-off for ABB / Emerson based distributed control systems (DCS). Performed FAT for new induced draft (ID) fan hydraulic control skids for upgraded (Howden) axialID fans. Acted as on-site construction support thru construction phase of projects. (2006 - 2009)

Ameren Illinois | Edwards, Meredosia, and Newton Fossil Power Projects

Acted as Owner's Engineer for design and interface of ADA-ES based Activated Carbon Injection (ACI) systems for seven coal fired units. Developed tie-in of Allen

Bradley PLC based silo control system with station networks for remote control and indication. Performed FATs and sign-off for vendor equipment. Performed station and vendor wiring diagram review/revision, logic diagram review, HMI graphics, determined testing procedures, and developed I/O list. (2006 - 2009)

Praxair Inc. / Burr Ridge, Illinois (2004 – 2006)

Core Account Manager, responsible for south eastern Pennsylvania territory, bulk atmospheric gas industrial accounts. Managed over 150 accounts and contracts for gas delivery, supply system service, and installation. Gained over \$80k in new business for three to five year, renewable, annual sales.

MWH Engineering Co. / Chicago, Illinois (2001 – 2002)

Milwaukee Metropolitan Sewerage District (MMSD)

Produced turnkey proposal for the upgrade of obsolete vibration detection system for the MMSD ISS Pumping Station main pumps.

CVG Electrificio'n del Caroni C.A. (EDELCA) / Guri Venezuela

Performed assessment of field instrumentation and controls devices for Hydro Units 1-20. Made recommendations for replacement of field instrumentation and controls equipment with microprocessor based SMART instrumentation for interface with legacy CAE system.

Sargent & Lundy LLC. / Chicago, Illinois (1997 – 2001)

Lafayette Utilities System / Louis 'Doc' Bonin Generating Stations

Upgrade of Boiler Control, Burner Management, Motor Control Centers (MCC) controls, Data Acquisition System (DAS), and Turbine Controls system for three Gas/Oil fired units. Performed assessment of existing field instrumentation and control devices. Prepared DCS specification, I/O database, instrument and equipment specification, equipment layout drawings, general work contract, P&IDs, SAMA Logic diagrams. Evaluate bidder's proposals, develop meeting work schedules. Act as on-site engineering field support during construction and start-up. (1997 - 2001)

City Public Service / O.W. Sommers and J.T Deely

Upgrade of BCS, BMS, DAS, and Boiler Feedpump Turbine, and Turbine Control (TCS) systems for four Gas/Coal fired units. (1999 - 2001)

Commonwealth Edison / LaSalle and Dresden

Performed revision of several safety and non-safety related instrument setpoint calculations to account for an increase in the allowable Reactor Building ambient high temperature during a LOCA event in an adjacent unit and upgrade of several safety and non-safety related process control loops. (2000)