SVERDRUP ENGINEERING SERVICES

PROJECT EXPERIENCE

AEA FMI Sierrita Substation OCM Replacement

Sierrita, AZ

Civil, Electrical, and Structural design consisted of replacing two obsolete 138 kV oil circuit breakers (OCB's) located in FMI Sierrita's 200MW main substation with new SF6 breakers. The existing electro-mechanical relays for the OCB's were replaced with new Schweitzer relays for the SF6 breakers. Demo drawings created for removing existing breakers, grounding connections and cables.

The civil and structural design included incorporating geotechnical evaluation into design. the new breaker foundations, breaker installation, and pipe bus connection into existing substation. Electrical design included grounding, cable ampacity, voltage drop, conduit fill, conduit pull, short circuit analysis, arc flash study, and protective device settings. Drawings include one/three-line, grounding, panel schedules, relay/control schematics, interconnects, racks elevations, bill of materials, civil, and structural. Protection devices settings calculated, settings file created and uploaded into relays. Provided construction and start up support.

Owner: Freeport-McMoRan

Design: January 2020

Inservice: December 2020