



A Rockwell Automation Company

El Paso Corporation - Colorado Interstate Gas Greasewood Station As-Built Drawings

The Client:

El Paso's interstate transmission system spans the nation, border to border and coast to coast. The nationwide pipeline system is consolidated into three regional operations.

The Western Pipeline group consists of El Paso Natural Gas Company and Colorado Interstate Gas Company and is headquartered in Colorado Springs, Colorado.

Colorado Interstate Gas (CIG) is a major transporter of natural gas in the Rocky Mountain region. The Colorado Interstate Gas system is connected to nearly every major supply basin in the Rocky Mountains as well as production areas in the Texas Panhandle, western Oklahoma, western Kansas, and Wyoming.

The Requirement:

El Paso needed to develop electrical and control systems "As-Built" drawings for El Paso's Greasewood Compressor Station located in western Colorado.

The project consisted of the Turbine Compressor CG-1

PLC control panel and the Station PLC control panel. The control system was interconnected using Allen-Bradley 1756 ControlLogix PLCs and 1794 Flex I/O PLC hardware and software.

The Design Solution:

Hinz was contracted to engineer the "As-Built" drawings for the Greasewood CG-1 Station. A total of 34 drawings were produced and field verified in the overall project.

The station was operational at the time the project was executed, and the emphasis of the project was to provide the station with detailed documentation to maintain the PLC control system. The CG-1 turbine and station control panels, along with installation and associated electrical drawings, were provided as part of deliverables by others.

The first step was to create electrical and PLC control systems schematic drawings for Station and Unit control panels at each of the three stations. The drawings were created in the Hinz office and conformed to El Paso Corporation drawing standards and format. The drawings contained PLC control system hardware and I/O terminal block wiring using

Allen-Bradley ControlLogix, I/O modules for analog, discrete, RTD, and network signals. Allen-Bradley Flex I/O modules were also included in the control system drawings.

Next a Hinz Project Engineer traveled to each compressor station to field verify or "as-build" each new drawing. The drawings were "red-lined" while at site and then the changes made on the AutoCAD drawing back at the engineering office. An El Paso field technician, intimate with control system details at each site, was present to assist in the verification process by opening control panels and J-boxes, and to provide information about present wiring.

Executing the project in this manner allowed Hinz to ensure that accurate information was placed upon each of the drawings, and minimized errors in the conversion process.

