



A Rockwell Automation Company

## El Paso Corporation - Colorado Interstate Gas MOL Sieve Status Screen

### 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:

Colorado Interstate Gas Company planned to upgrade their MOL Sieve controls at the Rawlins Facility located in Wyoming. The facility was equipped at that time with an Uticor PLC which was obsolete and difficult to maintain. The plan was to use an existing ControlLogix PLC (which is the standard control platform for CIG) to control this process area as well. Updated PLC control code would allow operators to switch from manual mode to auto at any step without intervention from a PLC programmer as was required with the old platform.

The project objective was to move control of the three (3) MOL Sieves from the existing Uticor PLC to the existing ControlLogix PLC in Switch House #3. The Uticor PLC

and associated operator interfaces would also be removed. Remote Flex I/O was to be located near the sieves and connected to ControlLogix PLC via a redundant ControlNet network.

The control code from the Uticor PLC needed to be moved to the ControlLogix PLC. New functionality was requested for the manual sequence step advancement, as well as for switching from Manual to Auto mode without the help from a PLC programmer. A "Go To" function was added to allow operators to switch back into Auto mode from any step in the sequence.

### The Design Solution:

Hinz was contracted to prepare a detailed budgetary estimate for the control system upgrade of the existing MOL Sieves. Working with El Paso personnel, a detailed estimate was prepared to define the project scope, budget, and implementation plan.

The scope of work included:

- Installing AB Flex I/O panels. The Flex I/O is connected to the ControlLogix PLC via redundant ControlNet network.
- Moving the PLC control code from the Uticor PLC to the existing ControlLogix PLC.
- Updating the existing Intellution Fix32 HMI screens to allow for full automatic and manual control of the MOL Sieves.
- Replacing old control devices in the control room with a 10" color touch screen monitor.
- Developing the OIT program for display and control of all MOL Sieve unit parameters.

The detailed project scope included:

- Preparation of a detailed scope of work for the electrical and mechanical construction contractors' bid documents.
- Preparing a detailed Functional Requirements Document (FRD).
- Providing specification sheets for purchase by El Paso of all new equipment required for this project.
- Submitting project tracking documents to include progress reports and budget cost analysis.
- Developing PLC simulation code for software testing and providing for a witnessed software acceptance test.
- Commissioning and training of the new control hardware and software with final as-built documentation.

