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North American (NARCO) contracted engineering design and procurement assistance for the relocation and installation of a cryogenic gas processing plant. The plant design was for 25 MMscfd of 1190 Btu gas at 1000 psig. The plant processes included molecular sieve dehydration, a turboexpander, and demethanizer. The client provided new molecular sieve and residue gas recompressors.



Simplified process flow diagrams were initially developed for the existing facility. A simulation model was created so that various operating cases could be evaluated. Operation was then simulated to verify that existing equipment met the new service requirements. A complete set of P&IDs was then developed for the final plant configuration. Data sheets were prepared for the new vessels, pumps, heat exchangers, and air fin coolers for client procurement.

Project responsibilities also included the creation of all drawings for site preparation, plot layout, civil, structural, electrical, and piping necessary to install the facility at the new location. Drawings were prepared using AutoCAD™ with P&ID Advantage™ for the piping and instrumentation diagrams. The project was performed on a fast-track basis with design personnel working closely with the client and vendors to bring this project to a swift and successful completion.

