



Heidi K. Casper, Senior Process Engineer

SUMMARY OF QUALIFICATIONS

River City Engineering, Inc., Lawrence, Kansas USA 2009-Present

Process Engineering Consultant for the Oil & Gas Industry providing design and technical support for gas and liquids processing/handling projects.

- Serve as client's Project Manager for a 250 MMSCFD gas plant located in West Texas, from start of project through startup of plant.
- Part of an optimization team and responsible for 16 West Texas gas plants. Liase with operations and discuss issues that are causing them problems. Work options to alleviate these problems. Also, collect and analyze plant data to evaluate and track equipment performance and make recommendations on operating set-points to maximize recoveries.
- Provide process support for startup of several 200 and 250 MMSCFD cryogenic gas processing plants in West Texas. Activities include writing and implementation of purge procedures and dryout procedures, leading operations personnel in execution of said procedures, troubleshooting of equipment and operating modes, coordinating with equipment vendors for solutions, coordinating with EPC contractor to resolve issues.
- Create operating procedures and train operations personnel for several 200 and 250 MMSCFD cryogenic gas processing plants in West Texas
- Detailed engineering for various plant upgrades at large mid-Continent storage terminal. Upgrades included improved design of Thermal Oxidizer, reconfiguring Tank Farm for optimum layout, replacing underperforming TEG skid, and piping changes to improve operational flexibility. Developed options and presented to client. Worked with mechanical engineering contractor on piping layout, tie-ins, and other details.
- Facilitated several PHAs for 200 and 250 MMSCFD cryogenic gas processing plants in West Texas
- Facilitated PHA for a production facility in Argentina
- Performed debottlenecking study for 500,000 BPD fractionator in Mont Belvieu Texas
- Performed debottlenecking study for 200MMSCFD gas processing plant in Louisiana
- Assisted on performance test for 25 MMSCFD gas processing plant in West Texas
- Facilitated PHA revalidation for 25 MMSCFD gas processing plant in West Texas
- Performed a condensate piping study for a 25 MMSCFD gas processing plant in West Texas
- Facilitated PHA for new 40 MMSCFD compressor station in West Texas
- Assisted on PHA for a new 200 MMSCFD gas processing plant in West Texas
- Revised and fixed R3 Monthly Report for Gas Processing Plants for two facilities in West Texas
- Performed PSV study for client with approximately 130 valves across 3 compressor stations
- Assisted in PSV remediation study for client of approximately 50 valves
- Supported client during preliminary engineering for 24,000 bpd product purification process, focusing on arsenic removal. Scope of work included creating PFDs.
- Assisted PHA revalidation for 80MMSCFD natural gas processing plant in Eastern Louisiana
- Cause and effects study for main control system in a 80MMSCFD natural gas processing plant. Helped with P&ID revisions.
- Analysis of safety systems for a natural gas processing plant using SAFE charts.

- Study of tank filling options for shipping using dynamic simulation, with emphasis on heat transfer effects of tank filling.
- Preliminary engineering design of a depentanizer to reduce the concentration of sulfur and arsenic in NGL product. Optimized conditions to meet different specification classes. Provided cost estimates. Also studied the effects of changing operating conditions in debutanizer to provide the same effect.
- Study to evaluate viability of dividing wall column in a C2-C3-C4 separation train and provided cost estimates.
- Analysis of dehydration methods and setups with cost estimates to provide the most cost-effective option for a general natural gas dehydration case.
- Viscosity study of Dowtherm T heat transfer fluid in start-up conditions.
- Study to determine the best equation of state to predict the Joule-Thomson inversion curve by deriving the JT coefficient from thermodynamic principles.
- Updated and modified in-house programs for equipment sizing and pricing.

EDUCATION

University of Kansas

Lawrence, Kansas

B.S. Chemical Engineering, 2005 – 2009

PROFESSIONAL MEMBERSHIPS

Engineer in Training (EIT), Kansas
Gas Processors Suppliers Association