Case Study: Petrochemical Complex

Expert analysis and opinions related to EPC contractor's massive budget overruns and significant delays

GlassRatner

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Project

Engineering, Procurement, and Construction of an 800MM+ PDH facility

Contract

Cost-reimbursable with fixed fee

Primary Issues

Cost overruns

Schedule delays

EPC failures

Dispute

A midstream energy services company contracted with an EPC contractor to engineer, procure, and construct a petrochemical complex on the US Gulf Coast. The EPC contractor proceeded with the engineering design, starting with the front-end engineering design (FEED) package provided by the owner. Due to numerous engineering and construction failures, project costs increased by over $1 billion, construction labor man-hours increased by close to 100%, and project completion was delayed by nearly two years.

Approach

GlassRatner was retained by counsel for the owner to analyze the project management issues, engineering failures, procurement delays and failures, and construction failures, including labor productivity losses of the EPC contractor, as well as quantify the associated damages.

GlassRatner analyzed the EPC contractor's management and performance throughout each phase of the project, along with the quantity and quality of the EPC contractor's staff and the validity of the outstanding change orders. GlassRatner also analyzed the contractor's systems and procedures to evaluate if they were appropriate for such a complex EPC project. GlassRatner's experts also analyzed the EPC contractor's cost tracking, progress reporting, and construction planning, which contributed to the EPC contractor's failure to timely disclose its cost increases and schedule delays.

Approach

GlassRatner analyzed the EPC contractor's engineering failures across all disciplines, including piping, process, structural, instrument and controls, electrical, and 3D CAD modeling, all of which resulted in engineering rework that increased costs and delayed the follow-on work. In evaluating numerous engineering issues and revisions, GlassRatner's experts analyzed various engineering documents, including P&IDs, piping isometrics and designs, structural steel designs, plot plans and equipment layouts, and instrument and electrical drawings to identify valid changes from engineering errors or omissions.

GlassRatner analyzed the EPC contractor's procurement failures, including the issuance of incomplete requisitions and failure to timely procure equipment and material. Faulty procurement resulted in late delivery of key equipment and material to the site, which delayed and disrupted construction.

Approach

The GlassRatner team also evaluated the EPC contractor's construction failures, which included delayed pipe installation, changing steel erection methodologies, out-of-sequence work, excessive weld reject rates, and numerous equipment installation issues.

Finally, GlassRatner assessed the damages associated with the EPC contractor's performance failures on the project. Specifically, GlassRatner analyzed the additional costs associated with the engineering rework, engineering defects, schedule delays, labor productivity losses, over billing and extra-contractual profit, and repair costs.

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Outcome

Following issuance of GlassRatner's initialandrebuttalreports,GlassRatner supported its opinions by providing in-person expert witness testimony at a deposition and at a bench trial. After a three-month trial and after closing arguments, the two parties settled out of court, resulting in GlassRatner's client receiving $115,000,000.

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