

Case Study: Water Treatment Facility

Expert analysis and opinions related to schedule delay and claimed financial damages



Dispute

A multinational energy company contracted with a US-based EPC consulting firm (construction manager) on a reimbursable contract basis to manage the design and construction of a water treatment facility in the southwestern United States. The facility consisted of a pre-engineered building with multiple water treatment systems to process water, groundwater, and stormwater from an adjacent mining operation. The construction manager contracted on a lump sum with a US-based civil construction company (subcontractor) to perform mechanical, electrical, and piping (MEP) work on the facility. The project was originally scheduled to take less than ten months but ended up taking over two years to complete. As a result of the delay to completion and the associated cost overruns, the subcontractor brought a claim against the construction manager in the American Arbitration Association forum. The subcontractor alleged that it was owed \$20+ million for extended jobsite overhead, unpaid contract balance, and loss of efficiency. It also attributed most of the schedule delay to the construction manager. The construction manager filed a counterclaim for \$30+ million, alleging that the subcontractor failed to prosecute the work according to the contract, failed to properly staff the job with qualified personnel, and failed to meet project quality standards, necessitating repair and replacement of its work.

PROJECT

Water Treatment Facility

SUBCONTRACT

\$40MM+ Hybrid Lump Sum and T&M Construction Contract

PRIMARY ISSUES

Schedule Delay

Labor Productivity

Claims Analysis

Increased Overhead Costs



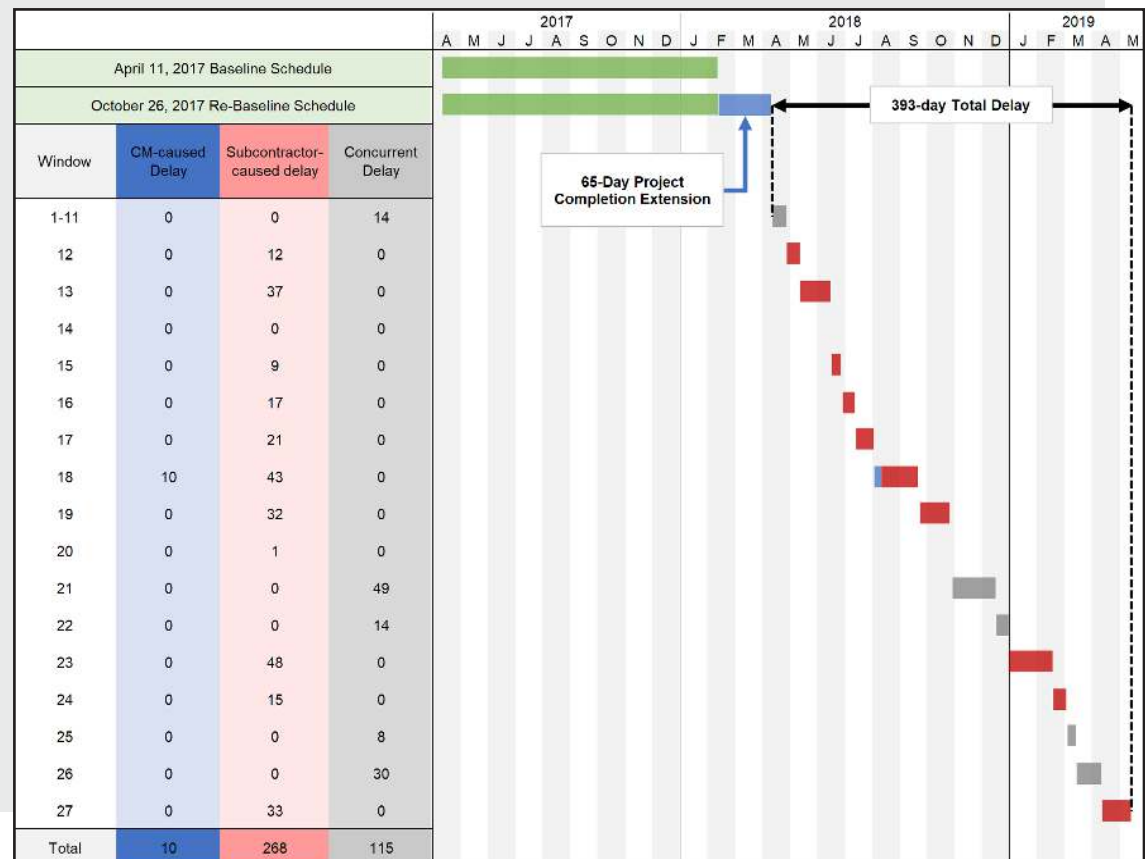
Approach

Interface was retained by the construction manager's counsel to evaluate the subcontractor's claims and perform a CPM schedule delay analysis to determine responsibility for the project's delays. Interface issued an expert report as well as a rebuttal report to the subcontractor's expert reports for use in the arbitration.

CPM SCHEDULE DELAY ANALYSIS

Interface performed a windows CPM schedule delay analysis to determine and assign responsibility for the project's delays. The windows delay analysis uses a baseline schedule, contemporaneous schedule updates, and an as-built or near as-built schedule to divide the project into periods or "windows." By breaking the project into windows, Interface was able to analyze delays to the project's critical path in discrete periods and determine how those delays altered the critical path.

Based on this analysis, Interface demonstrated that the subcontractor was responsible for a large portion of the delay on the project due to its inefficiencies and poor workmanship. In addition, Interface was able to demonstrate that many of the days of delay that the subcontractor blamed the construction manager for were either concurrent with subcontractor-caused delays or entirely the responsibility of the subcontractor. Moreover, Interface analyzed the schedule analysis prepared by the subcontractor's expert and determined it was flawed, as it was based on an unapproved baseline schedule and failed to establish a causal link between the critical path delays and the construction manager's actions or inactions. After Interface apportioned delay, it was able to evaluate the subcontractor's extended overhead claims.



Approach

CLAIM ANALYSIS

Interface evaluated the validity of the subcontractor's claim, which primarily included labor productivity losses and extended overhead costs, and analyzed the damages owed to each party. Interface concluded that the subcontractor's labor productivity analysis did not adequately demonstrate that its lower-than-expected productivity was a result of actions by the construction manager as opposed to its own mismanagement and failure to staff the project. Although the construction manager had approved multiple change orders throughout the project, the subcontractor's claim included damages for extended project overhead costs associated with change order work. Through an analysis of the change order process, Interface demonstrated that the subcontractor was contractually required to include all overhead costs for change order work in its change order requests and therefore precluded from making additional claims (including for overhead costs) associated with the change order work in question. In short, to the extent that the change order price did not include all costs, it was the fault of the subcontractor, not the construction manager.



Outcome

Interface issued an affirmative report and a rebuttal report responding to the subcontractor's expert reports. In addition, Interface provided expert testimony to the arbitration panel. The American Arbitration Association panel ruled that the subcontractor was due no damages for its productivity claim and only due a portion of its claimed damages for extended overhead costs.

