

CASE STUDY

Risk Assessment for Schedule Compliance, Health and Achievability

DRMcNatty provides Risk Assessments for effectively identifying and quantifying the amount of risk a project has. This assessment gives the team confidence in understanding how uncertainty and risk events impact the project goals and ultimately Project completion.

PROJECT AT A GLANCE

COMPANY



Major Energy Manufacturing Project

LOCATION

Gulf of Mexico

SERVICES PROVIDED

- Project Controls Support
- Schedule Review and Assessment
- Risk Management Services
- Software Training (P6, Acumen Risk, Fuse)

HOSTING

MLM Hosted:
Primavera P6
Acumen Fuse
Acumen Risk

TECHNOLOGIES USED

Primavera P6
Acumen Fuse
Acumen Risk



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Overview

A major contractor utilized Primavera P6 to build and maintain the project schedule. DRMcNatty's used their schedule for a risk assessment to ultimately give the project team an output of a highly accurate risk-adjusted forecast.

Challenges

There were several challenges presented by this schedule: Because it is built in an enterprise environment, many users have access to update/modify the information contained. This causes potential for redundant logic, open ends, lags, and constraints. All of these are contributors to a poorly built schedule that would produce inconsistent, unreliable results in a risk workshop. Before any risk exercise can commence, the schedule must first be cleansed of the above issues.

Solution

The risk process started by reviewing the contractor schedule file. This review was conducted in Deltek Acumen Fuse. The purpose is to find the areas that hinder a sound risk result. These hindrances include open ends, lags, constraints and redundant logic. Each of these problems was eliminated one at a time with the use of the Deltek Acumen Cleanse function. Schedule quality is key to driving valuable risk outcomes.

Identification of the uncertainty ranging was required to advance the risk model process. In this case, we chose to do +/- 10% for the majority of the schedule. It's pretty easy to rationalize a 10% change in duration either direction for most activities in a schedule. We then looked specifically at problem areas that were being impacted in the shop and field. These areas were being most impacted by welding, driven by the lack of qualified resources. Competition with other projects in the area was influencing the ability to attract resources. In that mindset, DRMcNatty decided to place a -5/+30% range for the durations of those most affected, piping and structural.

In addition, identification of Risk events with the project team was needed. There were just a few events we wanted to isolate separately from the duration uncertainty to understand what impact these discrete risks had on the Mechanical Completion (MC) of 1st Startup (to meet

contractual agreements). Because it is impacted by Gulf of Mexico weather, a couple of risks revolved around hurricane affecting the region both directly and indirectly. It could impact material deliveries in 2016, which could have significant impacts to the construction effort's early going and developing momentum to carry the project through. A more significant hurricane event of catastrophic proportion was considered but eventually pulled from consideration given its significantly wide range of outcomes and expenses. The project team would not consider carrying the significant amount of finances to cover an event very unlikely to occur. These risks were added to the Risk Register contained within Deltek Acumen Risk and refinements made there.

Lastly, the simplest task was to be executed, running the file through Deltek Acumen Risk. Running through Acumen Risk was performed by DRMcNatty staff, and then handed off to the client for a review of the results and refinement. DRMcNatty ran the risk file multiple times incrementally adding each risk separately, and then combined. We wanted to understand how each represented risk impacted the MC of 1st Startup, then various combinations of such. Through the calculation process, it is possible to identify those activities/ranges/risks most influencing the MC 1st Startup milestone.

Results

The result was a list of key activities most influencing to the completion that the client could then focus on. That focused list could then be the focal point for weekly/month discussions with the contractor and evaluate the performance of that list. This exercise also produced a probability or confidence level for achieving completion by a certain date. Through the entire risk process, DRMcNatty was actively including the client for instruction and oversight into the rationale of the contractor schedule. We were also messaging any problem areas either there from the beginning or added through the update process. DRMcNatty also continues now to provide ongoing support through each major contractor schedule file update and monitors schedule changes monthly using Deltek Acumen Forensics.