

# ENERGY EXPERT: ISSUES IN FOCUS

A quarterly review of disputes and complex issues in the hydrocarbon production and processing industries

Baker & O'Brien, Inc.

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## EPC Contract Dispute – Underbid, Overbuilt, or Somewhere in Between?

### Arbitration, Middle East and Africa

By Tim Rooney

Baker & O'Brien was retained to review the project record and opine on the technical aspects of claims for an international engineering, procurement, and construction (EPC) lump-sum turnkey (LSTK) project. The project consisted of a number of neighboring oil production facilities that experienced a 50% cost overrun and 100% schedule delay. Specifically:

- The owner claimed that the EPC contractor failed to correctly estimate the work from the beginning and then failed to manage the cost and schedule to meet the contractual requirements.
- The EPC contractor claimed that the project suffered from owner interference and mismanagement – incorrect site data, change orders, preferential engineering, and approval delays.

To evaluate various aspects of the project timeline, Baker & O'Brien evaluated the logical sequence of events taken along the project execution timeline. At the commencement of this project, a **functional specification** was used to conduct a competitive bidding process and award the LSTK contract. A functional specification is sometimes used in place of a **front end engineering design (FEED)** by an owner as a bid strategy in an effort to compress the overall duration of the project.

When using a functional specification, the owner only specifies the critical functional requirements of the facility, e.g., location; the amount and type of feedstocks; the required amount, type, and specifications of products; environmental requirements, such as air and water emission limitations; and potentially certain technologies.

Because of its nature, a functional specification depends on the previous experience and ability of the EPC contractor to perform sufficient design engineering and develop a cost estimate and schedule within an acceptable accuracy range. This results in engineering output that is less comprehensive than a typical FEED, as it shifts certain front end engineering activities into the EPC phase.

To evaluate whether this project was “underbid or overbuilt,” Baker & O'Brien compared the functional specification included in the bid package that formed part of the contract with what was actually built in the field. In addition, we evaluated the proposed scope of work for adequacy and reviewed whether the project change orders explained the variances.

### Project Execution Timeline



## Worker Fall Incident: Evaluating the Adequacy of Protection Systems and Practices

### Jury Trial, United States

By J. David Morgan

Falls are the leading cause of fatalities in construction, accounting for about one-third of all fatalities in the industry. To ensure safe working conditions, the Occupational Safety and Health Administration (OSHA) sets forth regulations regarding fall prevention, and operators and contractors have developed specific work practices to protect against falls. Protection is required from an unprotected side or leading edge of elevated work surfaces such as: platforms, stairways, ladders, roofs, pipe-racks, and tank roofs.

The required fall protection can vary depending on the unique hazards and conditions associated with each of these work surfaces, as well as the frequency of the activities performed on them. It is, therefore, essential that employers evaluate each work activity to select the appropriate protective equipment and protective barriers to ensure worker safety. Additionally, OSHA fall protection requirements have evolved over the years; employers must remain current with regulatory requirements and ensure that the appropriate and current fall protection requirements are provided. The types of fall protection include guardrails, safety nets, horizontal life-lines, personal fall-arrest systems, or a combination of these methods.



A worker fell from the top of a storage tank while performing planned maintenance activities on a pressure safety valve (PSV). The work was part of a preventative maintenance program, which was typically performed on a three to five year cycle. Baker & O'Brien was retained to investigate the following: (1) adequacy of the fall protection systems and the training in the use of the same; (2) communication of hazards from the employer;

(3) roles and responsibilities of those involved performing the maintenance work; and (4) the specific cause(s) of the incident.

We evaluated if the tank top was considered an elevated platform, whether handrails were required or practical, and the appropriateness of the employer-provided personal fall-arrest systems. We also looked at the possible anchorage locations, access to the tank top, communication of fall-related risks, and the training and frequency in personal fall protection equipment. We presented our findings and opinions in an expert report and delivered deposition and court room testimony.

## Crude Oil by Rail Terminal – Project Development Dispute

### Litigation, North America

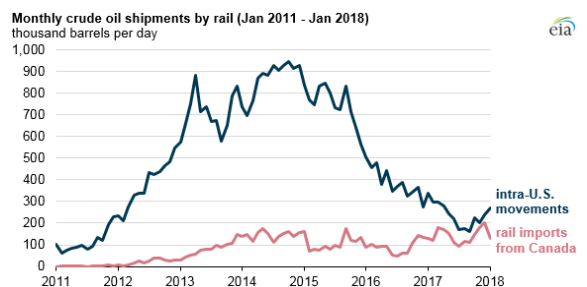
By Kevin Waguespack

Pipelines are the primary modes of transport for moving crude oil long distances over land because of their overall cost efficiency and generally more favorable environmental and safety considerations. Although shipping crude oil by rail was viewed to be an antiquated concept that harkened back to the Rockefeller days, drastic production growth in key basins like the Bakken (North Dakota) and Eagle Ford (Southwest Texas) changed everything, beginning in 2011. Around that time, crude oil shipments by rail in the U.S. began to increase drastically from less than 100 thousand barrels per day (MB/D) to over 900 MB/D by 2014 (figure). This activity came to a rather inglorious decline when new pipelines were built to connect the key growth basins to major crude oil hubs, such as Cushing and Houston. The decline in oil prices, beginning in late 2014 certainly didn't help matters.

To enable shipment of crude oil by rail, a loading terminal must be constructed near the production source, and there must be available receiving terminals in target markets. Many of these new crude-by-rail (CBR) terminals began as "merchant" projects - independently owned without any physical integration with oil producers or refiners.

Baker & O'Brien was engaged by one of the joint venture partners on one such merchant project, which was to be a CBR receiving terminal near several refineries. After originally agreeing to jointly develop the CBR project, the JV partners ended up in court over a failure to progress the project, with one party making a claim that the other party interfered with the project's development progress, thereby financially damaging the Claimant. The Defendant responded that the critical milestones were not achieved by the Claimant, and that the project's economic prospects were uncertain.

Baker & O'Brien was asked to assess the various project documents and related communications, including the development activities and key assumptions made in assessing the project's economics. We were also asked to evaluate the industry trends and commercial environment prevailing at the time of development, to review a valuation (damages) model, and to opine on other expert reports. The lead Baker & O'Brien consultant provided an expert report and testified at deposition.



## Consulting Support for Complex Commercial Disputes

When faced with complex commercial disputes in the energy-related industries, clients often turn to Baker & O'Brien for its independent and objective support. For over 25 years, the firm's consultants have employed their engineering knowledge, industry experiences, and commercial acumen to provide assistance on a wide range of matters. Our project experience includes disputes involving operational incidents, standards of care, asset valuation, commercial supply terms, product quality, large engineering and construction projects, and intellectual property.

Our clients include many of the world's largest law firms, insurance providers, and operating companies. Law firms rely upon Baker & O'Brien to evaluate

technical and commercial aspects of a case and provide expert testimony. Our analyses, conclusions, and expert testimony have been heard by judges, juries, and arbitration panels around the world. On insurance matters, clients rely upon Baker & O'Brien's assistance for investigation of industrial accidents and quantification of resultant property damage and business interruption losses. We are also called upon to assist insurers in subrogation actions by evaluating causation theories and claims for damages.

We welcome the opportunity to discuss our qualifications in more detail as they relate to your specific area of interest.

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