ENERGY EXPERT: ISSUES IN FOCUS

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

Baker & O'Brien, Inc. www.bakerobrien.com Volume 1, No. 3

How "Frozen" Assets Created a "Cold Cash" Obligation

International Arbitration, London

By John B. O'Brien, P.E.

To minimize transportation costs, crude oils of differing quality are often commingled together in the same pipeline to produce a single "common stream." Shippers on such pipelines do not receive back the same hydrocarbon molecules they deliver—instead, they receive a blend of the molecules from all shippers. Each shipper must at all times maintain inventory in the pipeline (the "line fill") in proportion to the volumes it ships and the value of inventory may sometimes exceed the original cost of the pipeline itself. Such pipelines often also employ systems (referred to as "quality banks") through which shippers exchange payments to account for differences in the quality of the crude they inject compared to the common stream quality.

A shipper on a large central Asian pipeline had its line fill "frozen" as the result of an adverse judgment against it in an unrelated dispute. This meant that the cargo representing the line fill could not be withdrawn—and any quality bank obligation calculated—until the unrelated matter was settled. When, after three years, the unrelated matter was finally resolved, and the shipper was allowed to withdraw the frozen crude oil, it was presented with a large quality bank payment obligation—primarily because crude oil prices had risen dramatically in the interim. Under the pipeline tariff agreement, the shipper filed for arbitration to have its quality bank obligation reviewed and reduced.

Baker & O'Brien was engaged as an expert to review the pipeline operator's quality bank calculations and determine whether they had been performed in accordance with the methodology outlined in the pipeline's tariff agreement. We concluded that the quality bank calculation methodology—as interpreted by the pipeline operator—improperly incorporated various coefficients that were related to the absolute value of crude oil at the time of withdrawal. Thus, the application of the methodology breached the key principle of the quality bank—to account solely for differences in crude oil quality—not temporal value differences. Our evidence was presented in the arbitration and the shipper was able to have its quality bank obligation reduced substantially.

Is There Such a Thing as a "Foolproof" Process Design?

International Arbitration, London

By Charles Freeny, P.E.

A major chemicals company licensed a proprietary catalytic process to manufacture a chemical intermediate used in the production of commodity chemicals. One part of the process involved an exothermic (heat-generating) reaction in which too much catalyst can lead to an out-of-control reaction. Two years after start-up, that part of the unit suffered an explosion and fire. The owner alleged the cause to be a design flaw in the emergency shutdown system (ESD), which, it claimed, was supposed to be100% "foolproof." The owner and its insurers filed an arbitration for damages against the plant's design contractors.

Baker & O'Brien was engaged by the contractors to investigate the "root" cause of the incident, whether the ESD system had functioned correctly, and whether the plant operators had been properly trained in operation of the unit—especially during unstable conditions. Several reports were prepared and submitted as evidence in the arbitration and our consultants were cross-examined at the hearing.

On investigation, it was revealed that the owner had made a number of design and operational changes that materially contributed to the incident. For example, mandatory laboratory analyses had been dispensed with, and some process control instrumentation had been decommissioned. Also, the owner's operators had deviated from the standard operating procedures that were an important part of the design basis. Finally, the explosion and fire had occurred during start-up—when the ESD system had been bypassed and locked out.

The incident demonstrated that no safety system can be considered "foolproof." Such systems rely on properly trained operators who understand the process, can observe and identify abnormal and/or dangerous conditions, and respond with appropriate actions.

When Failure to Operate "Prudently" Can Trump Force Majeure

International Arbitration, London

By Charles Kemp

A refinery entered into a long term contract with an adjacent petrochemical plant to provide feedstock for the latter's olefin production operations. The contract had a clause that defined a "force majeure event" as one which was "…*not foreseeable, or, if foreseeable, could not have been avoided or overcome by the affected party acting in accordance with prudent operating procedures.*"

Following start-up and initial operation, the owner/operator of the refinery declared seven force majeure events, resulting in reduced and irregular feedstock supply to the petrochemical facility. The petrochemical plant owner filed an arbitration against the refiner to recover damages due to lost production, alleging that the events were, in fact, foreseeable and/or could have been avoided by a prudent operator.

Baker & O'Brien was engaged to analyze each of the alleged force majeure events and opine on whether they were foreseeable, and if so, could they have been avoided.

The claimed force majeure events included, among other issues, changes to the refinery's crude oil quality, EPC contractor performance, offsite equipment failures, and technology performance limitations. A key element of our analysis was to define what constituted "prudent operating procedures" and whether the refinery had been operated in conformance with such procedures.

As part of this assignment, our consultants conducted on-site inspections and interviews at both the refinery and the petrochemical plant. Our opinions, written and oral, were entered into evidence at the arbitration hearing. After the hearing, but before any awards, the parties reached a mutually agreeable settlement.

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

BAKER & O'BRIEN INCORPORATED 20 YEARS

Celebrating a Tradition of Service

Dallas Headquarters

12001 N. Central Expressway
Suite 1200
Dallas, TX 75243
Phone: 1-214-368-7626
Fax: 1-214-368-0190

Houston

1333 West Loop South
Suite 1350
Houston, TX 77027
Phone: 1-832-358-1453
Fax: 1-832-358-1498

London

146 Fleet Street, Suite 2
London EC4A 2BU
Phone: 44-20-7373-0925

Baker & O'Brien Inc. is an independent, professional consulting firm specializing in technology, economics, and management practice for the international oil, gas, chemical, and related industries.

www.bakerobrien.com