

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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Refinery Power Outage – What were the Damages?

Litigation, North America

By Gary Devenish

Uninterrupted electrical power is essential for the safe and continuous operation of petroleum refineries. North American refineries typically source their electrical power from a supply grid operated by the local utility; most refineries do not independently generate all their own power.

In the event of a power failure, refinery equipment and instrumentation is designed to automatically default to a “safe” shutdown state. In addition, refiners have procedures and practices that detail specific actions that operations personnel must take during a loss-of-power event. Unfortunately, equipment damage can still occur due to the sudden stop of process flows and rapid changes in temperatures. Frequently, internal equipment components are damaged or fouled, which may not be noticed until normal operation has resumed. In these cases, the refiner may incur long-term losses after restarting due to adverse impacts on product yields or throughput.



Economic damages incurred due to a power outage typically fall into three categories: (1) the cost of repairing or replacing damaged equipment; (2) the loss of operating profit during the complete or partial outage; and (3) commercial losses incurred to manage feedstock purchase or product sales obligations. To determine the economic damages, one must consider (among several refinery-specific and market-related factors): the “normal” or baseline refinery operation; the appropriate duration of the outage or period of impaired operation; and what (if any) actions the operator should have taken to mitigate operating and commercial losses. Thus, an accurate assessment of the true economic damages requires a thorough understanding of refining economics, processes, operations, and maintenance practices.

A North American refinery shut down after a series of power interruptions from the local utility. The refinery incurred equipment damage, loss of operating income, and commercial losses. However, the parties disagreed on the extent of the damages caused by the incident. Litigation ensued, and Baker and O'Brien was retained to: (1) opine whether the refinery's operational response was consistent with accepted industry practices and procedures; (2) evaluate the reasonableness of the time the refinery took to return to normal operating levels; (3) evaluate the appropriateness of the claimed equipment repair costs; and (4) calculate the economic damages.

Baker & O'Brien reviewed the relevant refinery-specific and market-related data. We submitted an initial expert report, a second report in response to the opposing experts' rebuttal reports, and provided deposition testimony.

Preserving the Past – Pay Now or Pay Later

Arbitration, North America

By Kevin Milburn



A large mid-stream facility was owned by two partners. The Operating Partner was responsible for care, custody, and control of the plant, including all operations and maintenance activities.

The Non-operating Partner was responsible for funding their portion of the approved budgets for operations, maintenance, and capital expenditures. The agreement of both partners was necessary for large capital expenditures, as well as determining plant operating rates from time to time.

For economic reasons, the partners agreed to suspend operations in a portion of the plant. The agreement included a condition that the idled portion of the plant would be available to resume operations with one month's notice by either partner.

After considerable time had elapsed since the plant was idled and mothballed, the Non-operating Partner gave notice to restart the facility in accordance with the original agreement. The Operating Partner responded that it was not possible to restart the facility within a one-month time frame due to the condition of the equipment that had not operated in a long time. The Operating Partner estimated that reactivation efforts would incur significant costs and require more than a year to complete. The partners filed for arbitration to resolve this dispute.

Baker & O'Brien investigated whether standard industry practices were followed in the long-term preservation and maintenance of the idled equipment. In addition, we reviewed contract terms, preservation plans, equipment surveys, design reports, and costs associated with preservation and reactivation of the idled equipment. Our conclusions from this investigation were summarized in an expert report, which was defended in the arbitration hearing.

Refinery Flaring – More than Just about Safety

Litigation, North America

By Daniel Finelt

The processing of crude oil within a petroleum refinery is a complex operation that involves equipment operating at a range of pressures and temperatures, which the refiner must safely manage to avoid an uncontrolled release to the environment. Flare systems play a key role in this process as important safety devices used in petroleum refineries.

Excess hydrocarbon gases are combusted in the flare systems in a more environmentally-sound manner than the alternative of releasing the vapor directly into the atmosphere. However, one group of residents living near one U.S. refinery had an entirely different view of flares and filed a lawsuit against its neighboring refinery regarding several flaring events and their associated emissions.



Baker & O'Brien was retained to opine on: (1) the refinery operating practices and procedures associated with the specified flaring events; and (2) the related refinery operating, training, and maintenance practices to determine if they were consistent with industry practices and government regulations. In order to complete our assessment, we reviewed each of the incidents in detail to understand its cause(s), whether the refinery personnel acted to minimize flare emission impacts to the community, and whether they followed their own written procedures.

Following the development of an expert report and deposition testimony, the matter was settled.

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.

Dallas Corporate Office



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

Houston



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

London



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

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