

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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Investigating the Flash Point of a Vessel Explosion

Litigation, North America

By Tim Deutsch

A petroleum fuel's flash point is a key specification for its safe transportation and storage. In the laboratory, the flash point test determines the temperature at which the fuel vaporizes sufficiently to ignite in air. The U.S. Department of Transportation defines a "flammable" product, such as gasoline, as having a flash point of 100°F (37.8°C) or less. A "combustible" product like heavy fuel oil is defined as having a flash point of greater than 100°F.

Flammable fuels generally have more restrictive handling safety precautions than combustible fuels. For example, the U.S. Coast Guard certifies three marine vessel classes for carrying flammable liquids and two classes for carrying combustible cargoes. Inspections and the specific equipment used on each vessel determine its class. Fuels are tested to confirm their quality and compliance before ship loading.



The American Society for Testing and Materials (ASTM) publishes several standard methods for flash point testing of fuels; each method includes a description of the apparatus, the test procedure, and requirements for obtaining and preserving samples. When these procedures are not

carefully followed, laboratory testing can provide unreliable results and lead to disaster.

In one matter, a refiner loaded a vessel with heavy fuel oil on a cold January morning. Valves normally used for the loading process had frozen, refinery operations were disrupted, and unusual steps were utilized to line tanks up to the dock. A surveyor collected and tested samples and reported the cargo's flash point. Although testing qualified the product as meeting the vessel's certification requirements, a few hours after leaving the dock, the vessel exploded violently and sank.

Baker & O'Brien consultants investigated the failure of flash point tests to reveal the flammable characteristics of the cargo. Our consultants considered various factors, including the origin of the sample, sampling procedures, the sample containers used, handling of the samples from when they were obtained until being tested in the laboratory, and third-party testing of samples obtained after the event. Baker & O'Brien used this information, along with the plant's operating logs and inventory records to determine the cause of the explosion. We summarized our findings in an expert report and provided deposition testimony.

Marketing of Private-Brand Motor Oils – Were Customers Misled?

Litigation, North America

By Robert Beck

Motor vehicle manufacturers, in conjunction with oil industry organizations, specify the preferred grades and qualities of motor oil suitable for their engines. Over the years, advances in engine performance have demanded improvements in motor oil quality. However, many older vehicles still on the road can operate satisfactorily on less highly-formulated, lower-cost oils.



A discount retailer manufactured, packaged, and marketed its own “store brand” motor oils at prices below that of well-known major oil

company brands. The retailer sold several different grades and qualities—including the advanced quality—in the same aisle alongside competing major brands. Several store brand oils were only suitable for use in older vehicles, and the retailer labeled them as such. The retailer claimed the labeling met all of the statutory recommendations outlined by the American Petroleum

Institute (API) and other industry organizations that publish guidelines for such products. Despite this, a number of purchasers of the store brand oils claimed that they were misled into using inferior quality oil in their vehicles, which subsequently damaged their vehicle’s engines. A class-action lawsuit was filed against the retailer.

Baker & O’Brien was engaged to: (1) opine on whether the labeling complied with all industry guidelines and included required cautionary statements; (2) opine on whether the store brand oils would have harmed the customers’ engines if applied appropriately; (3) opine on what, if any, damage might have occurred from misapplying the oils; and (4) determine whether any of the plaintiffs had purchased the store brand oils for non-automotive use.

Following our investigations, Baker & O’Brien prepared a report detailing our findings and provided deposition testimony. After extensive discovery, the parties were able to negotiate a satisfactory settlement, thereby avoiding trial.

Commercial Impacts of Butane Blending into Crude Oil

Litigation, North America

By Daniel Finelt

A crude oil shipper on a common carrier pipeline filed a complaint with the governing agency concerning the financial impact of perceived quality degradation of its crude oil. The shipper’s crude oil was blended with other crude oils to produce a commingled stream. The complainant alleged that the pipeline owner was blending butane into the shipper’s crude oil up to the pipeline vapor pressure specification, thereby reducing the price that the shipper received for its crude oil.

Baker & O’Brien was engaged to prepare evidence concerning butane blending into crude oil and its associated impacts on transportation systems, petroleum refiners, and the market value of crude

oil. Our efforts focused on the: 1) butane content of light crude oils; 2) price relationships between butane content and crude oil price; 3) pipeline throughput impacts associated with butane blending; and 4) butane impacts on petroleum refiners.

Baker & O’Brien prepared an expert report and a subsequent rebuttal report explaining our findings. Our reports assisted in settlement negotiations.



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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