

**ANALYSIS OF AGREEMENT CONTAINING  
CONSENT ORDERS TO AID PUBLIC COMMENT**  
*In the Matter of Quaker Chemical Corporation, Global Houghton LTD., Gulf Houghton  
Lubricants LTD., and AMAS Holding SPF*  
*File No. 171-0125, Docket No. C-4681*

**I. Introduction**

The Federal Trade Commission (“Commission”) has accepted for public comment, subject to final approval, an Agreement Containing Consent Orders (“Consent Agreement”) from Quaker Chemical Corporation (“Quaker”), Global Houghton LTD. (“Houghton”), Gulf Houghton Lubricants LTD., and AMAS Holding SPF (collectively, the “Respondents”). The Consent Agreement would remedy the anticompetitive effects that likely would result from Quaker’s proposed acquisition of Houghton (“Transaction”).

Absent a remedy, the Transaction would threaten to harm competition in the manufacture and sale of: (1) aluminum hot rolling oils (“AHRO”) and associated technical support in North America; and (2) steel cold rolling oils (“SCRO”) and associated technical support in North America. In particular, the Commission’s Complaint alleges that the Transaction, if consummated, would violate Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and that the asset purchase agreement constitutes a violation of Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 45, by substantially lessening competition in the manufacture and sale of AHRO and SCRO in an area no greater than North America.

The Consent Agreement addresses the Commission’s concerns by, among other things, requiring Quaker to divest Houghton’s North American AHRO and SCRO product lines to Total S.A. (“Total”), a multinational oil and gas company headquartered in France. Quaker must also divest the intellectual property associated with Houghton’s AHRO and SCRO, and adjacent products including steel cleaners and AHRO compatible hydraulic fluids.

The Commission has placed the proposed Consent Agreement on the public record for 30 days to solicit comments from interested persons. Comments received during this period will become part of the public record. After 30 days, the Commission will again review the proposed Consent Agreement and any comments received, and will decide whether it should withdraw from the Consent Agreement, modify it, or make it final.

**II. The Respondents**

Respondent Quaker, a publicly traded company, is a global supplier of specialty process chemicals, lubricants, greases, and other metal processing products. Headquartered in Conshohocken, Pennsylvania, Quaker’s 2018 revenues were \$868 million.

Respondent Houghton is a global supplier of advanced metalworking fluids and services. It serves the automotive, aerospace, metals, mining, machinery, and beverage industries. Houghton is headquartered in Valley Forge, Pennsylvania.

### **III. The Proposed Acquisition**

The Commission's Complaint alleges that a relevant product market in which to analyze the Transaction is the manufacture and sale of AHRO and associated technical support services. AHRO is a mixture of water, oil, and additives, custom-formulated to lubricate each individual rolling mill. AHRO is necessary to allow manufacturers to operate hot rolling mills for aluminum sheet production. There is no substitute product for AHRO; lubricants for rolling other metals or for other rolling processes will not work for aluminum hot rolling.

The associated technical support services are appropriately included in this product market, as AHRO suppliers provide these services as an integral component of the physical product. There is no separate charge for these services. Technical support services begin with the formulation of the oil and continue throughout the life of the supply relationship, including necessary modifications to the formulation and contamination monitoring in both the trial phase and during active production. Technical support services from the AHRO supplier are essential to the ongoing performance of the mill, and there is no substitute for these services as provided in conjunction with AHRO.

The Commission's Complaint also alleges that an area no greater than North America is a relevant geographic market in which to analyze the effects of the Transaction. U.S. AHRO customers do not obtain supply from outside North America. Rolling oil suppliers typically supply their customers by truck and station technical support personnel at or near their customers' mills to ensure timely supply and rapid service. At the mill, customers blend the oil with the mill's own water supply to create the final emulsion. Given the large volumes of rolling oil required to run a mill, and the need for timely re-supply, shipping AHRO from outside North America would be cost- and supply-prohibitive.

The relevant market for AHRO and associated technical support services in North America is highly concentrated. Quaker and Houghton are the only two companies that commercially supply AHRO in North America. Thus, post-transaction, Quaker will be the monopoly AHRO supply option for third parties in North America.

Timely, sufficient entry is unlikely to alleviate any potential competitive harm in the market for AHRO and associated technical support services. Consistent with the Commission's allegations in the 2010 AEA Investors/ Houghton ("Houghton/D.A. Stuart") complaint (Docket No. C-4297), entry is difficult in this market. Formulating AHRO and providing technical support services require specialized knowledge that is not widely available. Even the few AHRO customers with in-house supply capabilities are unable to supply fully their own mills given the shortage of qualified scientists to develop and real-time modify rolling oil formulations and support their use in mill operations. Large, well-established customers of AHRO are unaware of potential entrants that could enter the market and supply AHRO.

Customer acceptance is also a significant entry barrier. Customers are reluctant to switch AHRO suppliers because AHRO is so critical to aluminum sheet rolling. Aluminum manufacturers place great weight on the AHRO suppliers' experience and reputation. They likely would be unwilling to chance a supplier that lacks the parties' established reputations and

decades of experience given the risk of catastrophic effects should the supplier's product or support capabilities fall short. There are significant time commitments and costs associated with switching to a new AHRO supplier. Given that AHRO is a relatively small cost component in the production of aluminum coil, it is unlikely that a small significant sustained price increase would justify a lengthy trial process for a new entrant without a proven track record.

The Commission's Complaint also alleges that a relevant product market in which to analyze the Transaction is the manufacture and sale of SCRO and associated technical support. SCRO includes sheet cold rolling oils, pickle oils, and tin plate rolling oils ("TPRO"). Steel manufacturers use SCRO to reduce friction and prevent metal-to-metal contact between surfaces of the mill's rollers and the steel during the cold rolling process for steel sheet of any width or gauge, for any further processing (e.g., tinplating or coating with another substance, e.g., zinc, aluminum, or paint), and for any end-use (e.g., can bodies, can ends, and other closures for food and beverages, household appliances, such as washers and dryers, automobile or truck parts, or building and construction products). Like other rolling oils, SCRO is a mixture of water, oil, and additives for lubrication and corrosion protection. SCRO producers customize the product for each individual rolling mill, and there are no substitutes for SCRO. Lubricants designed for other mills, metals, or rolling processes could damage mill equipment and render the processed steel unusable.

As with AHRO, SCRO suppliers provide essential technical support services as part of the supply of the lubricant (i.e., without a separate charge). The provision of these technical services is an essential component of the SCRO supply relationship.

As with AHRO, North America is the relevant geographic market for SCRO. Staff's investigation did not reveal evidence that any mill in the United States received SCRO products and services from suppliers outside North America.

Steel manufacturers in the United States primarily use SCRO made with animal fat in their mills. Because animal fat will congeal under typical tanker truck conditions, SCRO suppliers must deliver it via heated tanker trucks. This heating requirement adds to transportation costs, making imports of animal fat-based SCRO cost-prohibitive.

The animal fat-based composition of SCRO used in the United States also limits customers' choices for supply. Steel mills in the United States typically are older and have relatively smaller tanks that require frequent drainage. As a result, it is not economical for U.S. steel mills to use vegetable oil based (commonly referred to as synthetic oil) that is more advanced but higher cost. European steel mills, which are generally newer and have larger tanks, use this synthetic SCRO. Given the greater cost of synthetic SCRO and the costs of shipping, U.S. steel manufacturers are unlikely to turn to overseas SCRO suppliers in response to a small significant sustained price increase.

As in the market for AHRO, Quaker and Houghton are the two dominant suppliers of SCRO and associated technical support services in North America. Although fringe competitors participate in this market, to the extent that customers need both SCRO and related support and technical services combined, the merger may present as an effective merger-to-monopoly.

#### **IV. Effects of the Transaction**

The proposed transaction would be a merger to monopoly in the market for AHRO and associated technical support services. Staff's investigation has revealed no evidence to suggest that the likely competitive effects of this combination are meaningfully different from those of the Houghton/D.A. Stuart transaction remedied by the Commission in 2010. In addition, customers worry that the proposed transaction would consolidate all AHRO technical expertise within one company. Today, Quaker and Houghton compete on their technical support service capabilities, including their availability, responsiveness, and expertise in anticipating, preventing, diagnosing, and addressing problems related to their lubricants in order to ensure smooth operations and high quality aluminum sheet. The parties' support service technicians must thoroughly understand the design of each mill, the products made there, and the interaction between the rolling oil, substrate, and rollers. When problems arise today, they create an opportunity for a competitor to challenge the incumbent supplier as the customer seeks a solution and/or a superior product as quickly as possible to get operations back on track. Post-merger, customers will have only one support team – Quaker's – to turn to in the event of operational issues, and will lose the advantage of a possible switch to encourage investment in troubleshooting.

The Transaction presents similar concerns for customers of SCRO and associated technical support services. Notwithstanding the presence of a few fringe suppliers, SCRO customers fear that the deal may result in higher prices, lower service levels, reduced innovation, and supply availability challenges. Like AHRO customers, SCRO customers face meaningful barriers to switching suppliers, including lengthy trial periods, downtime, and long waits for customer approval.

Quaker and Houghton also compete on the quality of their technical support services and expertise. Customers rely on their SCRO suppliers to troubleshoot and address operational issues as they arise. When the incumbent supplier cannot resolve problems to the customer's satisfaction, the customer may turn to a competing supplier to propose an alternative solution. Post-merger, Quaker will no longer face Houghton as a competitive threat to keep its service levels sharp; competition from fringe SCRO suppliers may not be sufficient to protect customers.

Customers have also raised concerns that the proposed merger would eliminate their only SCRO alternative in the event of supply challenges or emergencies. If a supply disruption occurs, SCRO customers must either turn to an alternative supplier or idle their mills at great expense. Steel manufacturers take comfort in the availability of multiple potential SCRO suppliers to ensure that they can access this essential input in times of shortages. The proposed transaction would eliminate the most promising alternative supply option for SCRO customers, and may deprive them of any viable alternative at all.

A prospective entrant into the SCRO market faces similar barriers to those that render entry unlikely for AHRO, including technical expertise and reputational hurdles. Entry is difficult even for a supplier that operates in other fluid-based markets.

## **V. The Proposed Consent Agreement**

The proposed order requires a divestiture to Total. Total's business includes oil and gas exploration, refining, and marketing as well as chemical manufacturing. Total had annual revenues in 2018 of approximately \$210 billion. The divestiture to Total would replicate Houghton's competitive presence in the AHRO and SCRO markets in North America by creating a viable, effective, and independent competitor. The order requires Quaker to divest certain products, transfer key employees, and provide transition services and toll manufacturing. The term of the proposed order is ten years. The order also requires Quaker to supply the divested products to Total for a transitional period while transferring the manufacturing technology to Total.

To remedy harm in the market for AHRO, Quaker will divest to Total: (1) Houghton's formulations, intellectual property, including patent for non-oleic acid formula, trade secrets, including know-how for its AHRO; (2) customer contracts for North America; (3) key Houghton employees that are responsible for the commercial and technical aspects of the AHRO business; and (4) adjacent products including fire resistant hydraulic fluids.

To remedy harm in the market for SCRO, which includes sheet cold rolling oil, TPRO, and pickle oil, Quaker will divest to Total: (1) Houghton's formulations, trade secrets and intellectual property, including know-how for sheet cold rolling oils, TPRO, and pickle oil; (2) customer contracts for North America; (3) key Houghton employees that are responsible for the commercial and technical aspects of the SCRO business; and (4) SCRO and TPRO cleaners.