ANALYSIS OF AGREEMENT CONTAINING CONSENT ORDERS
TO AID PUBLIC COMMENT
Gencorp, File No. 031 0152

I. Introduction

The Federal Trade Commission ("Commission") has accepted, subject to final approval, an Agreement Containing Consent Orders ("Consent Agreement") from GenCorp Inc. ("GenCorp"), which is designed to remedy the anticompetitive effects resulting from GenCorp's acquisition of the propulsion business of Atlantic Research Corporation ("ARC"), a subsidiary of Sequa Corporation ("the Acquisition"). The Consent Agreement includes a proposed Decision and Order ("Order") that would require GenCorp to divest ARC's in-space liquid propulsion business within six (6) months after the date the Acquisition is consummated. The Consent Agreement also includes an Order to Hold Separate and Maintain Assets that requires GenCorp to preserve the ARC in-space liquid propulsion business as a viable, competitive, and ongoing operation until the divestiture is achieved.

The proposed Consent Agreement has been placed on the public record for thirty (30) days for receipt of comments by interested persons. Comments received during this period will become part of the public record. After thirty (30) days, the Commission will again review the proposed Consent Agreement and the comments received and will decide whether it should withdraw from the Consent Agreement or make final the Consent Agreement's proposed Order.

On May 2, 2003, Aerojet-General Corporation ("Aerojet"), a subsidiary of GenCorp, entered into an asset purchase agreement with ARC (which was subsequently amended on August 29, 2003) to acquire substantially all of the assets of ARC, as well as the shares of ARC UK Limited, for $133 million in cash. The Commission's Complaint alleges that the Acquisition, if consummated, would violate Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 45, by lessening competition in the U.S. markets for the research, development, manufacture and sale of monopropellant thrusters, bipropellant apogee thrusters, dual mode apogee thrusters, and bipropellant attitude control thrusters – four different types of in-space propulsion thrusters.

II. The Parties

GenCorp is a technology-based manufacturing company headquartered in Rancho Cordova, California. Its businesses are concentrated in three areas: aerospace and defense, fine chemicals and automotive. Through its Aerojet subsidiary, GenCorp researches, develops, manufactures and sells propulsion products and systems for space and defense applications, as well as armament systems for precision tactical weapon systems. Aerojet produces a full range of in-space propulsion thrusters at its facility located in Redmond, Washington.

Sequa Corporation ("Sequa") is a diversified industrial company that produces a broad range of products through operating units in five business segments: aerospace, propulsion, metal coating, specialty chemicals and other products. The propulsion segment of Sequa's business consists of the ARC business. ARC, headquartered in Gainesville, Virginia, is a leading supplier of liquid and solid fuel propulsion products and systems for military, commercial and civil applications. ARC produces a full range of in-space propulsion thrusters at its liquid propulsion facilities in Niagara, New York, and Westcott in the United Kingdom.

III. The In-Space Propulsion Markets

In-space propulsion thrusters (which are, essentially, engines) are used to maneuver spacecraft, such as satellites and interplanetary vehicles, through space after a launch vehicle delivers them to the upper atmosphere. In-space propulsion thrusters are essential components of in-space propulsion systems, which include valves, fuel tanks, fuel lines and other parts necessary to generate the thrust needed to move spacecraft in space.

In-space propulsion thrusters are used primarily to either place spacecraft into their intended orbits, or maintain their proper position while in orbit. The process of transferring a spacecraft to its intended orbit after it has been dropped off by a launch vehicle is referred to as "apogee insertion," and the space propulsion thrusters that perform apogee insertion are known as "apogee thrusters." Apogee thrusters typically generate between 90 pounds and 140 pounds of force.

Attitude control thrusters are used to provide gentle pushes that allow spacecraft to control their angular position while in orbit so that sensors, transponders or other hardware on the spacecraft are properly oriented with respect to the Earth (or other target) to perform their functions. Attitude control thrusters can also perform a function called "station-keeping," which refers to a spacecraft's ability to maintain its position in an assigned orbital slot, in its proper orientation. Because attitude control and station-keeping functions require only small, short bursts of thrust to perform, attitude control thrusters typically produce five pounds of thrust or less.

There are two primary types of in-space propulsion thrusters: monopropellant thrusters and bipropellant thrusters. The primary difference between these two types of thrusters is that monopropellant thrusters utilize a single liquid fuel source (typically hydrazine), whereas bipropellant thrusters operate using a combination of both a liquid fuel (typically monomethylhydrazine) and an oxidizer. Monopropellant thrusters are well-suited for pulsed operations of short duration, making them ideal for attitude control and station-keeping. As such, monopropellant thrusters typically produce less than a pound to about 5 pounds of thrust (although for particular applications, some monopropellant thrusters are designed to produce as much as 140 pounds of thrust).

A bipropellant in-space propulsion system typically consists of separate attitude control and apogee thrusters. As with other apogee thrusters, bipropellant apogee thrusters generally produce thrust that ranges between 90 to 140 pounds of force. Bipropellant attitude control thrusters provide thrusts comparable to monopropellant thrusters, which are usually 5 pounds of force or less. Bipropellant in-space propulsion systems are more fuel efficient, as well as more expensive, than monopropellant propulsion systems.

Dual mode apogee thrusters are specialized bipropellant apogee thrusters that operate using hydrazine, the same fuel used by monopropellant thrusters, in combination with an oxidizer. A dual mode propulsion system affords spacecraft manufacturers the option of using monopropellant thrusters and a bipropellant apogee thruster on a single spacecraft without having to use two separate fuel systems. As a result, a spacecraft can attain the benefit of using highly reliable and accurate monopropellant thrusters for attitude control while at the same time utilizing bipropellant apogee thrusters. Dual mode apogee thrusters are more fuel efficient, as well as more expensive, than traditional bipropellant apogee thrusters.

The determination by customers of the appropriate type of propulsion thruster to put on a satellite or spacecraft is based on the satellite's or spacecraft's mission and encompasses a variety of factors. Those factors can include the nature of the mission, the length of the mission, the orbit(s) in which the spacecraft will operate, the mass and volume of the spacecraft itself, the launch vehicle it will be placed on, other equipment that will be on the spacecraft, and the price of the thrusters. An engineering decision is made, based on all of these factors, as to which type of propulsion thruster(s) is best suited for a particular satellite or spacecraft. Although the price of an in-space propulsion thruster is a factor that customers take into consideration when selecting an in-space propulsion thruster, it is rarely the most important factor. For these reasons, customers for one type of in-space propulsion thruster – monopropellant, bipropellant apogee, dual mode apogee, or bipropellant attitude control – would not be likely to switch to any of the other types of thrusters for use on a particular satellite or spacecraft, if the price of the first type of thruster were to increase by five to ten percent.

The relevant geographic market for each in-space propulsion market is the United States. Although there are a handful of foreign suppliers of in-space propulsion thrusters, they are not effective competitors in the U.S. in-space propulsion markets. The principal reason for this is that U.S. export regulations, in particular the International Traffic in Arms Regulations, make it very burdensome and time consuming for U.S. commercial, civil and defense customers to procure foreign thrusters, making foreign suppliers an unattractive option. In addition, on many U.S. Department of Defense as well as other U.S. governmental spacecraft programs, foreign-supplied thrusters are not an option at all due to national security issues. Accordingly, for the vast majority of in-space propulsion applications, only U.S. manufacturers are effective competitors.

The U.S. markets for the research, development, manufacture and sale of monopropellant, bipropellant apogee, and dual mode apogee thrusters are all highly concentrated. Aerojet and ARC are the only viable suppliers of these thrusters to commercial, civil and defense customers in the United States for most programs. Even for customers where other suppliers (such as foreign manufacturers) are potential options, Aerojet and ARC are each other's closest competitors and the other suppliers are substantially less attractive options. Prior to the acquisition, Aerojet and ARC frequently competed against each other for U.S. monopropellant, bipropellant apogee, and dual mode apogee thruster business, and this competition benefitted customers of these products. By eliminating competition between the only two viable competitors for most customers and by far the two best options for other customers in these highly concentrated markets, the proposed acquisition would create a virtual monopoly in each of these markets. As a result, the combined firm would be able to exercise market power unilaterally. It is thus likely that as a result of the acquisition purchasers of monopropellant, bipropellant apogee and dual mode apogee thrusters would be forced to pay higher prices and that innovation, service levels, and product quality in these markets would decrease.

The U.S. market for the research, development, manufacture and sale of bipropellant attitude control thrusters is also highly concentrated. In fact, ARC is the only firm with recent sales of bipropellant attitude control thrusters to U.S. customers. For many customers, including the vast majority of U.S. governmental customers, ARC essentially has a monopoly position in the bipropellant attitude control thruster market. Although Aerojet does not currently produce bipropellant attitude control thrusters, it has substantial existing expertise and technology in this area, has produced these thrusters in the recent past, and is a likely potential entrant into the market. Aerojet's acquisition of the ARC in-space liquid propulsion business eliminates the most likely potential competitor in this market and for many customers, including the vast majority of U.S. governmental customers, leaves the market with a single supplier for the foreseeable future.

There are significant impediments to new entry into each in-space propulsion market. A new entrant into any one of these markets would need to undertake the difficult, expensive and time-consuming process of researching and developing a viable in-space propulsion thruster, acquiring the necessary production and testing assets, obtaining the appropriate environmental permits, and developing the expertise needed to successfully design, manufacture, and market these products. Finally, a new entrant would need to establish what is commonly referred to as "heritage" for each new thruster, which is a successful track record of use in space. It would take a new entrant over two years to accomplish these steps and achieve a significant market impact. Additionally, new entry into the in-space propulsion market is unlikely to occur because the sunk costs and economies of scale necessary to enter the market and effectively produce in-space propulsion thrusters are extremely high relative to the limited sales opportunities available to new entrants.

IV. The Consent Agreement

The Consent Agreement effectively remedies the acquisition's anticompetitive effects by requiring GenCorp to divest ARC's in-space liquid propulsion business. This business consists of, among other things, ARC's Niagara and Westcott production facilities, specialized manufacturing and testing equipment, technical drawings, advertising and training materials, customer lists, intellectual property and other assets at the Niagara and Westcott facilities used in the research, development, manufacturing, testing, marketing, customer support and sale of monopropellant, bipropellant apogee, dual mode apogee, and bipropellant attitude control thrusters (collectively "ARC In-Space Liquid Propulsion Assets"). Pursuant to the Consent Agreement, GenCorp is required to divest the ARC In-Space Liquid Propulsion Assets to a buyer, at no minimum price, within six (6) months from the date of the Acquisition. The acquirer of the ARC In-Space Liquid Propulsion Assets must receive the prior approval of the Commission.

If GenCorp has not divested the ARC In-Space Liquid Propulsion Assets within the time and in the manner required by the Consent Agreement, the Commission may appoint a trustee to divest these assets, subject to Commission approval. The trustee will have the exclusive power and authority to accomplish the divestiture within six (6) months, subject to any necessary extensions by the Commission. The Consent Agreement requires GenCorp to provide the trustee with access to information related to the ARC in-space liquid propulsion business as necessary to fulfill his or her obligations.

The proposed Order to Hold Separate and Maintain Assets that is also included in the Consent Agreement requires that GenCorp hold separate and maintain the viability of the ARC In-Space Liquid Propulsion Assets as a viable and competitive operation until the business is transferred to the Commission-approved acquirer. Furthermore, it contains measures designed to ensure that no material confidential information is exchanged between GenCorp and the ARC in-space liquid propulsion business (except as otherwise provided in the Order or in the Order to Hold Separate and Maintain Assets) and provisions designed to prevent interim harm to competition in each in-space propulsion market pending divestiture. The Order to Hold Separate and Maintain Assets provides for the Commission to appoint a Hold Separate Trustee who is charged with the duty of monitoring GenCorp's compliance with the Order to Hold Separate and Maintain Assets. Pursuant to that Order, the Commission has appointed Charles L. Wilkins of KPMG LLP as Hold Separate Trustee to oversee the In-Space Liquid Propulsion Assets prior to their divestiture and to ensure that GenCorp complies with its obligations under the Consent Agreement regarding the In-Space Liquid Propulsion Assets. Mr. Wilkins has more than 35 years of experience both inside the aerospace and defense industry and as a professional advisor. He has held several key management positions in the aerospace and defense industry, including senior corporate auditor, controller and chief financial officer, and during his professional consulting career has assisted most of the larger defense contractors in the United States in a wide array of services including litigation and dispute resolution, compliance matters and profit maximization.

The proposed Order requires GenCorp to provide the Commission, within thirty (30) days from the date the Order becomes final, a verified written report setting forth in detail the manner and form in which GenCorp intends to comply, is complying, and has complied with the provisions relating to the proposed Order and the Order to Hold Separate and Maintain Assets. The proposed Order further requires GenCorp to provide the Commission with a report of compliance with the Order every thirty (30) days after the date of that initial compliance report until the divestiture has been completed.

The purpose of this analysis is to facilitate public comment on the Consent Agreement, and it is not intended to constitute an official interpretation of the Consent Agreement, the proposed Decision and Order, or the Order to Hold Separate and Maintain Assets, or to modify their terms in any way.