COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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Dear Senator Hollings:

As requested by you, Senator Strom Thurmond, and Representative Mendel J. Davis, we have reviewed the plans made by Avco Corporation to close its Charleston plant and to consolidate all of its operations in a Government-owned facility in Stratford, Connecticut. We examined into the effect that the consolidation would have on the Department of Defense (DOD) concerning prices and delivery schedules for engine overhauls and spare-parts production, and we inquired into the disposition of the Government equipment that was being used in the Charleston plant.

The Lycoming Division of Avco Corporation is the sole producer of the T-53- and T-55-series turbine engines and of the associated spare parts used by the Army on various aircraft. The major activities at Stratford, where the facilities are owned by the Government but have been managed by Avco since 1951, consist of production of engines and related spare parts, engine overhauls, and research and development.

The Charleston plant, owned by Avco except for a major part of the equipment, was established originally in April 1966 and was expanded in 1968 as a feeder plant for certain major engine components and for the overhaul program. The Charleston plant was used primarily for engine overhauls and for the production of titanium compressor rotor assemblies which are used to modify T-53 engines. The titanium rotors have longer wear lives than the rotors they replace and increase operational time between engine overhauls.

By the end of November 1971, all production and overhaul operations at the Charleston plant had been terminated. All of the equipment identified for transfer to the Stratford plant had been shipped from Charleston.

As you know, the Army has reduced drastically its requirements for the production of engines, and this has resulted in a sharp decline in Avco's Government business. During the past 24 months, the contractor's military engine

production steadily decreased, and as of October 1971 all contracts were completed.

Since combined plant capacity--370 engines and 220 engine overhauls a month--at Charleston and Stratford would significantly exceed the Army's projected needs of 15 new engines and 150 engine overhauls a month for 1972 and 1973, Avco decided to consolidate its operations in the Government-owned facility to eliminate costly overhead expenses. Since the overhead rates negotiated between Avco and the Government reflect fixed costs at each location, the reduction of excess plant capacity at one location should result in a reduction of overhead charges.

Considerations which influenced Avco's decision to consolidate its operation at Stratford were its desire to leave its research and development activities undisturbed and to cooperate in the DOD plan to phase out the Government's ownership of industrial facilities in the possession of contractors by purchasing the Stratford facilities.

Avco is relying heavily on its current research and development programs at Stratford to remain competitive in its field. There were no research and development facilities at Charleston. At the time of their decision to consolidate, Avco officials projected that about 14 percent of their 1972 engine production sales would result from Stratford's current research and development programs and that by 1975 this effort would have contributed to about 56 percent of their sales. Avco officials stated that Avco was engine-production-oriented and that, unless current research and development efforts contributed substantially to production programs, there would not be sufficient spare-parts production and engine-overhaul work to keep Avco operating in the late 1970's.

We believe that there is some validity to maintaining the research and development and production capability at Stratford. Avco officials have stated it takes about 3 years of continuous, undisturbed research and development effort to start production of an engine. Any move of this effort to

another location, according to Avco officials, would take about 2 years to complete and would hinder seriously their research and development effort.

The latest DOD Industrial Mobilization Production Planning Program negotiated between Avco and the Army Aviation Systems Command in September 1970 requires that equipment be available to produce the mobilization requirements of 188 helicopter engines and 93 equivalent engines in spare parts a month. In February 1971, when Avco decided to consolidate its operation, the Charleston plant could not meet this requirement since it could produce 100 engines and 20 equivalent engines a month. The Stratford plant has greater capacity. Prior to the consolidation Stratford could produce 270 engines and 54 equivalent engines in spare parts a month to meet mobilization requirements.

To effectively meet the total mobilization requirement at Stratford and to provide capability to manufacture items which previously were produced at Charleston, Avco requested that 322 pieces of equipment be transferred from Charleston. Avco initially will use 141 pieces of this equipment for current production, and the remaining 181 items will become part of the mobilization package.

Although the Army Aviation Systems Command already has designated Avco as a planned producer for turbine engines in the event of mobilization, we believe that some question may be raised about the transfer of equipment for mobilization requirements before obtaining the required approval to establish a mobilization equipment package from the Assistant Secretary of Defense (Installations and Logistics).

Upon completion of current production, Avco is expected to transfer 116 items to the mobilization base and the remaining 25 items will be made available for use at other locations. In all, the Department of the Army will make 1,677 pieces of equipment--743 at Charleston and 934 at Stratford--available for use elsewhere. The majority will be reported to the Defense Industrial Plant Equipment Center as being

idle and available for use by other military agencies. The Center is responsible for the management of DOD-owned idle industrial plant equipment and, as such, maintains a listing of idle equipment which must be screened before new equipment can be purchased. The Government may effect some savings by distributing this equipment where it is needed currently in lieu of purchasing new equipment.

As part of our continuing effort in the management of DOD-owned equipment, we will evaluate, at a later date, the effectiveness of the screening of the above-mentioned 1,677 items against the equipment requirements of other activities.

In line with DOD policy to phase out contractor use of Government-owned facilities, as expressed in a March 1970 memorandum by the Assistant Secretary of Defense (Installations and Logistics), Avco advised the Assistant Secretary in September 1970 that it would negotiate the purchase of the Stratford facility and a portion of the Government-owned equipment at Stratford and Charleston. Avco planned to consolidate all parts and engine production at Stratford, which would require transferring the production of the titanium rotor from Charleston to Stratford, and to continue to use the Charleston plant for engine overhaul and repair effort.

As stated earlier, the Army reduced its needs for new helicopter engines and consequently Avco had to cut back on its labor force while still incurring overhead costs at two locations. During this time the Army had refused Avco permission to move equipment to Stratford from Charleston until it could be shown that the costs to produce the titanium rotor would not be higher in Stratford.

In April 1971 Avco informed the Army that it could not operate both plants economically and decided to close the Charleston plant. Because of the reduced requirements for engines and the desire for continued research and development in helicopter engines, the Army accepted Avco's decision to consolidate its operations at Stratford.

We examined into the overhaul and titanium-rotor production costs at Stratford and at Charleston. We believe the cost of manufacturing titanium rotors initially will be higher at Stratford. In June 1971 Avco proposed a unit price of $4,973; 73 percent of the manufacturing effort would occur at Stratford. Avco, 2 months earlier, negotiated a unit price of $3,918; 92 percent of the manufacturing effort would occur at Charleston. During this period, however, Charleston had produced about 3,000 rotors. The price increase for the work to be performed at Stratford reflects the loss of the experience developed at Charleston.

As Stratford continues to produce the rotors, it is rapidly becoming more efficient. For example, the production of the 125th titanium rotor at Stratford required 400 hours. As Stratford gained experience, the 195th unit required 225 hours and the 339th unit required only 154 hours. As labor hours decline it is logical to assume that the labor costs will be reduced in future negotiations. Until Stratford has gained sufficient experience in producing the titanium rotor with the full complement of equipment to be transferred from Charleston, however, we cannot estimate whether Stratford's costs eventually will be comparable to those that would be experienced at Charleston.

At the time the production capability for the titanium rotors was transferred from Charleston to Stratford, all deliveries of rotors needed to meet critical requirements had been made by Charleston. Current delivery schedules for the titanium rotors, according to Avco and Defense Contract Administration Services Office officials, will be met with operations at Stratford. In fact, deliveries scheduled for October 1971 were 1 month ahead of schedule.

The cost to overhaul engines was lower at Charleston than at Stratford. Avco negotiated a time and material contract and obtained an hourly negotiated rate of $16.78 for Stratford and $14.02 for Charleston to overhaul engines during the period May 28 to November 30, 1971. This difference, according to Avco officials, would have been narrowed in the

future if the Charleston plant had remained open, since experience had shown that the annual wage increase at Charleston usually was higher than at Stratford. Further, the Stratford rate includes some of the Charleston severence-pay costs.

Avco has taken steps to reduce the direct-labor and engineering hours by improving its overhaul methods, establishing new labor standards, and grouping rework parts to reduce machine setup time. At this time we cannot predict whether these steps, coupled with a reduced overhead, will be sufficient to ensure that, in the future, Stratford's costs to overhaul engines will be comparable to Charleston's.

This report is also being sent to Senator Strom Thurmond and Congressman Mendel J. Davis. We plan to make no further distribution unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of this report.

We trust that this information is responsive to your request. If we can be of further assistance, please let us know.

Sincerely yours,

Comptroller General
of the United States

The Honorable Ernest F. Hollings
United States Senate