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

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The Honorable John Sparkman Ci-United States Senate

L Dear Senator Sparkman:

On January 24, 1973, you requested that we give you our findings and views on the enclosed proposal submitted to you by Dr. Jules-Lawrence Morse, president of Apollo Applications Research Institute. He proposed replacing the monitoring, surveillance, and cost-reporting functions which Government contractors now make.

We discussed the proposal with Dr. Morse on three separate occasions and examined the limited amount of supporting documents available. There are significant aspects of the proposal which Dr. Morse could not adequately explain; however, we did obtain the following information.

NATURE OF PROPOSAL

Dr. Morse proposed a monitor cost control system for replacing all monitoring, surveillance, and cost-reporting functions now being performed by Government contractors. His system would first be applied to contractors performing work for Government civil agencies but would expand by 1975 to include all Department of Defense contractors.

He told us that his system, based on a new calculus which had not yet appeared in the textbooks, would convert the proposed negotiated cost data into a computerized mathematical model. Processing the contractors' internal accounting systems data through his mathematical model would standardize the reporting functions for all contractors. He is of the opinion that his system would be of assistance during contract negotiations.

Dr. Morse envisions that, in addition to assuming all Government contractors' functions, the Institute's teams, composed of technical experts, would evaluate contractors' technical efficiency to assist the Congress in ascertaining how effectively funds are being expended.

To accomplish the cost-reporting and technical evaluation functions, Dr. Morse contemplates hiring about 6,300 unemployed

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aerospace workers during the initial phase of the program. The staff would then be expanded to about 12,000 when coverage was applied to Department of Defense contractors. Dr. Morse envisions the use of a computer complex with remote terminals located in contractors' plants. Dr. Morse estimated that his system, including personnel and computer, would cost about \$1 billion a year compared with the Government's present cost of about \$9.5 billion a year. This amount is apparently a rough estimate, because Dr. Morse did not have any detailed support for the estimate.

According to Dr. Morse, the savings of about \$8.5 billion a year could then be used to hire unemployed workers to initiate a minature city program.

IMPLEMENTING PROPOSED SYSTEM

To implement the Monitor Cost Control System, Dr. Morse envisions that the Institute would receive appropriated funds yearly from the Congress as if the Institute were a Government agency. Dr. Morse told us that, upon receiving initial funding, his system could become operational in about 2 months and that all cost-reporting requirements would then be deleted from contracts with a value of over \$100,000. The contracting officers in all Government agencies would send the Institute a copy of each proposal and the negotiated prices to be converted into the mathematical model. A team from the Institute would then visit the contractor's plant and use the model for the first onsite audit.

Dr. Morse told us that a cost report would be prepared upon completing the initial audit at the contractor's plant. Dr. Morse stated that, by using the contractor's internal accounting system data, his system could issue a standard cost report to all Government agencies. He told us that frequent team visits and resultant cost reports would depend upon several factors, including the dollar value of the contract, the nature of the contract, and the difficulties involved.

If the team found unfavorable variances, such as cost overruns, schedule slippages, or technical problems, Dr. Morse said that the contractor would first be given an opportunity to take corrective action. If the contractor failed to correct the problem, the Institute would issue a report to the cognizant agency. If corrective action was still not taken, a report would be issued to the Congress.

We asked to examine the format and content of the cost report envisioned by Dr. Morse, but he had not put his ideas B-177958

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into writing. We attempted to understand the report through discussion. Dr. Morse could not adequately describe the report but stated that it would contain an analysis of the results of the application of the mathematical model to the contractor's cost data.

Dr. Morse told us that his system had been unofficially applied to several Government contracts with very successful results. We asked Dr. Morse if we could examine the reports covering such applications, and he informed us that no such reports had been prepared. We then asked his permission to contact the Government officials responsible for the contracts on which his system was supposedly applied. Dr. Morse told us that the work had been done in an unofficial capacity and requested that we make no such inquiries, because the matter could cause him some problems.

DIFFERENCES FROM EXISTING FUNCTIONS

According to Dr. Morse, a number of differences exist between his system and the cost-monitoring functions presently being used by Government contractors.

- --His proposed system would require less time and fewer people and would be more efficient.
- --He could make the cost-reporting function at a fraction of the amount now being paid to contractors, even if the existing cost reports were still issued.
- --His system would standardize the reporting structure by processing all the contractors' internal cost data through the computerized mathematical model.
- --Contractors have a tendency to use different approaches within the same contract, whereas his system would use the same procedures and mathematics for all calculations, regardless of the contract or contractor.
- --Cost-monitoring functions are confined primarily to hardware-type items, whereas his system would be equally effective for level-of-effort projects.
- --His system could make reporting at any level of the project, whereas cost-monitoring functions generally stop at the third level of the work breakdown structure.
- --Most of the functions used today rely heavily on the contractors' cost-estimating capabilities, whereas his

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system would not rely on estimates, because the mathematics involved are precise and make the resultant reports extremely accurate.

CONCLUSION

We were unable to obtain specific details on how Dr. Morse's proposed system would work, except that it was based on a highly complex mathematical theory which has not yet appeared in the textbooks. Although such a proposal should be supported by a detailed system description containing implementation plans, comparison with existing systems, and a cost proposal, Dr. Morse lacked such documentation and he could not give us an adequate explanation of his proposal. Thus it was not possible for us to evaluate his proposal. On the basis of our discussions with Dr. Morse, we seriously question the practicability of the system.

We trust that this information is responsive to your needs. We shall be pleased to discuss this matter with you or members of your staff if you so desire.

Sincerely yours,

Comptroller General of the United States

Enclosure