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DEPARTMENT OF THE ARMY
ASSISTANT SECRETARY OF THE ARMY
RESEARCH, DEVELOPMENT AND ACQUISITION
WASHINGTON, D. C. 20310-0103

ARMY SCIENCE BOARD

FINAL REPORT OF THE AD HOC SUBGROUP

ON

THE IMPACT OF COMPETITION IN CONTRACTING ON RESEARCH AND DEVELOPMENT

DECEMBER 1988

This report is a product of the Army Science Board. The Board is an independent, objective advisory group to the Secretary of the Army and the Army Chief of Staff. Statements, opinions, recommendations, and/or conclusions contained in this report are those of the Ad Hoc Subgroup on "The Impact of Competition in Contracting on Research and Development," and do not necessarily represent the official position of the U. S. Army or the Department of Defense.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

In September 1987, the Army Science Board Ad Hoc Study Group was appointed to assess the impact of known and likely changes in statutory and regulatory guidelines in the Contract of Acquisition of research and development. The study group held four (4) fact-finding sessions and provided recommendations based on the panel assessment of the information gathered.

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SUBMISSIONS TO THE AD HOC STUDY GROUP

1. Multi-Association (AIA, EIA & NSIA) dated 21 Jul 88
   Topic: IR&D/B&P Costs

2. Environmental Research Institute of Michigan dated 12 Jan 88
   Topic: Effects of Competition

3. Southwest Research Institute dated 25 Jan 88
   Topic: Competition Advocacy Program Effect on Not-For-Profit Research Institutes

4. The Charles Stark Draper Laboratory, Inc. dated 11 Feb 88
   Topic: Impact of CICA on Draper

5. Perceptronics dated 2 Mar 88 Topic: Views on Competition Issues

6. SRI International dated 23 Mar 88 Topic: Views on the Effects of CICA on Nonprofit Research Organizations

7. Stanford University dated 23 Mar 88 Topic: Concerns about Regulations and Policies Related to the Funding of Research

8. AEL Industries, Inc. dated 23 Mar 88 -- Topic: Perspective of Small Business

9. George Washington University dated 31 Mar 88 Topic: Competition in Contracting from the University Perspective

10. Electronic Industries Association dated 15 Apr 88
    Topic: Comments on Terms of Reference and Panel Questions

11. Paper dated 20 Jun 88 submitted by Mr. John R. Moore, Subject: Considerations and Issues Involved With Competitive R&D Contracting

12. Summary transcript of an interview with Earl Williams by Dr. Glacel on 24 Mar 88.

DEPARTMENT OF THE ARMY

ARMY SCIENCE BOARD

REPORT OF THE AD HOC STUDY GROUP ON THE IMPACT OF COMPETITION IN CONTRACTING ON RESEARCH AND DEVELOPMENT

Study Group REPORT

The three-year old Competition in Contracting implementing structure has adopted a narrow view of its mission and is pursuing an overly restrictive interpretation of the 1984 Competition in Contracting Law as it relates to research and development. The Study Group is concerned with the resulting erosion of long-term technology base efforts and the concurrent threat to innovation. The Study Group endorses immediate action aimed at reestablishing the special importance and nature of research and development in procurement procedures, both directly and as it is intrinsically coupled with certain repeated production buys.

A large competition advocate organizational structure appears to address primarily statistical goals which measure the number of procurements which are subject to competition and the number of dollars spent pursuant to competitive procurements. This structure fosters an atmosphere which discourages the use of statutory exemptions reflecting Congress' intention that other than formal competitive procedures be used in certain circumstances. The Study Group believes that the competition advocate structure has failed to recognize and encourage use of those nuances in the Congressional mandate. This failure to address the Congressional direction reflected in statutory exemptions poses a serious threat to the national defense technology base.

Both production capability and clearly perceived commitment to technology base efforts are necessary to support continuing industrial mobilization resources. It takes three to five years to build a technology team, which the stroke of a pen can destroy. In industry, the production base ultimately supports many significant research and development efforts via acceptable Independent Research and Development overhead rates, direct investment in technology, and investment in the capital facilities and equipment needed as part of a technological capability. Competition for the production of advanced technology systems can lead to destruction of specialized engineering capabilities necessary for mobilization.

In particular, current law (10 U.S.C., Section 2304(c)) directs that the head of an agency may use procedures other than competitive procedures "... when ... it is necessary to award the contract to a particular source or sources in order ... to maintain a ... supplier available for furnishing ... services in case of a national emergency or to achieve industrial mobilization, ..." This exemption applys to maintaining critical research, development and engineering teams intact. The exemption is not, however, interpreted as applying to research and development capabilities but rather to production capabilities only. Maintenance of critical masses of focused researchers addressing specific technology base issues should be supported by the exemption.

The head of an agency may use procedures other than full and open competition when it is necessary to award the contract to a particular source or sources in order to establish or maintain an essential engineering, research, or development capability to be provided by an educational or other non-profit institution or a federally-funded research and development center. This section has been misinterpreted to substitute the notion of uniqueness for the notion of essentiality.

The head of an agency may use procedures other than full and open competition only when the property or services needed by the agency are available from only one responsible source or only from a limited number of responsible sources and no other type of property or services will satisfy the needs of the agency, ((c)(1)). For the purpose of applying this section, section (d)(1)(A) as amended in 1987, provides "... in the case of a contract for the property or services to be awarded on the basis of acceptance of an unsolicited research proposal, the property or services shall be considered to be available from only one source if the source has submitted an unsolicited research proposal that demonstrates a concept (i) that is unique and demonstrates a unique capability of the source to provide the service; and (ii) the substance of which is not otherwise available to the United States, and does not resemble the substance of a pending competitive procurement."

Notwithstanding 1987 legislation interpreted (Army Office of General Counsel Memorandum, May 10, 1988, attached) to the contrary, the notion of a unique and innovative concept has been confused by requiring that a unique ability to perform be demonstrated before an unsolicited proposal can be funded. This restrictive interpretation of the law coupled with a widespread

and genuine fear in the research and development community concerning the commercial security of unique and innovative concepts set forth in the unsolicited proposal format has led to a precipitous drop in the number of meritorious unsolicited proposals being submitted. There is an impression that ideas submitted in unsolicited proposal sometimes show up in subsequent Broad Agency Announcements. The Study Group believes that unsolicited proposals are an important way to develop and assure the viability of the national technology base. Broad Agency Announcements are not broad enough and can result in significant delays. These announcements are viewed as restrictive, not expansive. No provision is made for truly new concepts (except for those improperly founded in unsolicited submissions) as the government must undertake the impossible task of anticipating research areas and results. With shrinking real budgets, the problem is exacerbated.

Finally, statistics, while inadequate at present because of the short time period since implementation of the 1984 Act (in April, 1985) and reporting delays, seem to confirm a widespread belief in industry that increased bid and proposal costs required to prepare competitive proposals are eroding the independent research and development budgets. Because the amount which can be spent on proposals plus the amount which can be spent on independent research is capped, the resulting increased emphasis on proposal preparation leads to reduced commitment to self-directed research and development. This problem is compounded in that there are no offsetting administrative savings for industry associated with competitive procurements. Where price competition is used, contract audits might, for example, evaluate only performance criteria.

Recommendations

1. The perception that the burden of justification for contract actions using other than competitive procedures for research, development, and engineering is too onerous should be minimized. The long-term positive results achievable by maintaining important research capabilities should be addressed. (See Assistant Secretary of Defense memorandum dated September 23, 1987, copy attached). In particular, guidance on (1) maintaining critical research, development and engineering teams intact, (2) establishing and maintaining a variety of essential capabilities in the not-for-profit sector, and (3) more fully supporting proffers of unique and innovative concepts should be promulgated.

2. Consideration should be given to exempting research and development (6.1, 6.2, 6.3a) from the competition review process.

3. Procedures should be implemented to encourage unsolicited proposals which demonstrate unique and innovative concepts regardless of whether or not the proposer is the only possible performer of the proposed research. Unique and innovative concepts submitted as part of unsolicited proposals should be protected and individuals who reveal, distribute or publish unique and innovative aspects should be reprimanded. Training and supervisory attention should be focused on protecting unsolicited proposal and sole sources proprietary data.

4. The Acquisition Authority should submit written findings concerning the impact of competition on research and development in conjunction with each annual Competition Advocate's Report to Congress. Data should be included to measure both government initiated and contractor initiated research, development and engineering.

5. A case study based review of Independent Research and Development <u>versus</u> Bid and Proposal expenditures should be conducted and consideration should be given to determining long-term consequences to the nation's technology base caused by requiring competition for every production buy.

6. Consideration should be given to contract formats which minimize audit requirements where competitive procurement practices are followed.

7. Consideration should be given to the long term need for separate Competition Advocates now that the basic concepts of the new competition in contracting programs have been implemented.

DEPARTMENT OF THE ARMY
OFFICE OF THE GENERAL COUNSEL
WASHINGTON, DC 20310-0104

10 May 1988

MEMORANDUM FOR THE CHAIRMAN, ARMY SCIENCE BOARD COMPETITION SUBGROUP

SUBJECT: Interpretation of Amendment to Section 2304(d)(1)(A) of Title 10

You have inquired whether 10 U.S.C. Section 2304(d)(1)(A), as amended by Section 923(b) & (d)(2) of Public Law 99-500, allows the award of sole-source contracts to research and development contractors on the basis of unsolicited proposals in circumstances where such contractors cannot demonstrate a "unique capability" to perform the planned research. Our opinion is that the Competition in Contracting Act allows such awards, notwithstanding the absence of demonstrated unique capability, when the contractor's proposal demonstrates a unique and innovative concept. This, of course, assumes that acceptance of an unsolicited proposal is otherwise authorized.

We draw our conclusion from the plain meaning of the words used by Congress in Public Law 99-500. Whereas the predecessor language in Section 2304(d)(1)(A) provided for awards on the basis of unsolicited proposals where the contractor's proposal demonstrated a "unique and innovative concept," the revised language allows for awards where the proposal demonstrates a concept "that is unique and innovative or, in the case of a service, for which the source demonstrates a unique capability . . . to provide the service . . . ." 10 U.S.C. 2304(d)(1)(A)(i) (emphasis added). To us, it appears that Congress' plain intention was to allow for a sole-source award on the basis of an unsolicited proposal when the contractor can demonstrate a proprietary concept that is unique and innovative but, for some reason, cannot demonstrate a unique ability to perform.

The implementating regulations contained in the FAR are consistent with the above interpretation in that they simply reiterate the statutory passages. See Proposed FAR 6.302-1(a)(2)(i) (approved for publication 26 April 1988).

We would be happy to discuss this matter further if you desire.

Brian D. Boyle
Assistant to the General Counsel

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-8000

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SEP 23 1987

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE ARMY (RD&A)
ASSISTANT SECRETARY OF THE NAVY (S&L)
ASSISTANT SECRETARY OF THE AIR FORCE (RD&L)
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Procurement Process for Nonprofit Organizations

The Department of Defense and educational institutions have a long history of cooperation in research and engineering to aid the fulfillment of the Department's mission. The Department by itself or together with the Nation's educational institutions has established nonprofit organizations and Federally Funded Research and Development Centers (FFRDCs) to provide essential capability in research, engineering and development. Contracts for research, engineering or development with these organizations establish or maintain such needed capabilities.

The Competition in Contracting Act of 1984 granted an exception to the full and open competition requirements of the Act when the Department contracts with educational institutions, FFRDCs or nonprofit organizations in order to establish or maintain essential research, engineering or development capability (10 U.S. Code 2304c(3)).

We are aware that this authority is being utilized to support the essential research, engineering or development capabilities provided by educational institutions and FFRDCs. However, use of this authority to support the capabilities of other nonprofit organizations has been sparse and, as a result, we may not be accomplishing the objective of maintaining these valuable research resources. The perception that the burden of justification for such contract actions is too onerous should be minimized by the long term positive results gained from maintaining such research capabilities.

Contractual access to such organizations should be facilitated consistent with the intent and requirements of the Competition in Contracting Act of 1984 when it is in the interest of the government to do so.

Robert B. Costello
Assistant Secretary of Defense
(Production & Logistics)

DEPARTMENT OF THE ARMY
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WASHINGTON, DC 20310-0103

3 SEP 1987

Mr. Gilbert F. Decker
Chair
Army Science Board
Penn Central Federal Systems Company
1800 Diagonal Road, Suite 500
Alexandria, VA 22314-2840

Dear Mr. Decker:

In my letter of March 3, 1987 to Dr. Irene Peden, I asked her to appoint an Army Science Board Panel of five or six members to serve as an ad hoc "Competition in Contracting" study group. Mr. Storch, the chairperson of that study group met with Brigadier General Henry, the HQDA Senior Advisor and Ms Kelley, the HQDA Staff Assistant, in late June.

It became clear at that meeting that the terms of reference in the March 3 letter were too broad for an effective six-month study effort.

In order to allow optimization of ASB efforts within a reasonable timeframe and to assure meaningful and practical results of long term benefit to the Army, I have decided to focus on the following revised objectives and terms of reference.

The broad objectives of the study group should be limited to:

a. Assessment of the impact of known and likely changes in statutory and regulatory guidelines related to competition, in the context of acquisition of research and development.

b. Recommending, where appropriate, changes in research and development acquisition guidelines, regulations or practices to achieve broad Army objectives.

The terms of reference for the study shall include, but not necessarily be limited to, the following:

a. Objective assessment of the impact of the increased emphasis on competition on contractor

APPENDIX A

independent research and development (IR&D) and the mix of the IR&D and bid and proposal (B&P) cost pool (e.g., the potential decrease in innovation, and potential change in allocation of business resources due to competition).

b. Objective assessment of the unsolicited proposal, "broad agency announcement," and Small Business Innovation Research Program techniques, as contrasted with the "normal" individually defined and solicited R&D competition process, from the perspectives of large and small businesses, universities and not-for-profit institutions, to include a review of pre-CICA vs. post-CICA practices (industry and Government); treatment of proprietary data and other intellectual property; evaluation/selection/rejection of proposals; and quality of products.

c. Objective assessment of the future status and viability of not-for-profit organizations, to include Federally Funded Research and Development Centers, as competitive entities in the post-CICA context considering use of the current CICA exceptions to full and open competition (especially 10 U.S.C. 2304(c)(3) (FAR 6.302(a)(2)(ii)).

I will continue as the sponsor for this study. The Senior Advisor will be BG Charles R. Henry, Competition Advocate General, OASA(RDA). Mr. George E. Dausman, Acting Deputy Assistant Secretary for Procurement will serve as the cognizant principal Deputy. The HQDA Staff Assistant will be Ms. Sue Crisp, SARD

The study panel should be tasked as described above and should complete its work by 31 March 1988.

It is not anticipated that it will be necessary to go into "particular matters" as defined by Section 208, Title 18, United States Code.

Sincerely,

J. R. Sculley
Assistant Secretary of the Army
(Research, Development and Acquisition)

1 September 1987

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