INS-O-00-02

INSPECTION REPORT

INSPECTION OF ALLEGED IMPROPRIETIES REGARDING ISSUANCE OF A CONTRACT

DECEMBER 1999

U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
OFFICE OF INSPECTIONS

December 16, 1999

MEMORANDUM FOR THE DIRECTOR, OFFICE OF NUCLEAR ENERGY, SCIENCE AND TECHNOLOGY

FROM: Sandra L. Schneider
Assistant Inspector General for Inspections
Office of Inspector General

SUBJECT: INFORMATION: Report on "Inspection of Alleged Improprieties Regarding Issuance of a Contract" (INS-O-00-02)

BACKGROUND

The Office of Inspector General (OIG) received an allegation that the Department of Energy (DOE) improperly awarded a noncompetitive, multimillion-dollar contract to General Atomics through another contractor, AlliedSignal. The Office of Inspections, OIG, initiated an inspection to review the procurement action.

Inquiries determined that the contract in question was for a pilot plant project associated with the Department's Depleted Uranium Hexafluoride (UF_6) Management Program, which is administered by the Office of Nuclear Energy, Science and Technology (NE). Although NE had not solicited proposals, in 1996 NE received a proposal from General Atomics and AlliedSignal to undertake a cooperative pilot-scale demonstration of technologies developed by the proposers to address the long-term disposition of DOE's inventory of depleted UF_6. The then Director of NE had his staff pursue a contract for the proposed project. NE contacted DOE's Pittsburgh Energy Technology Center (PETC), which is now part of the Federal Energy Technology Center, with the objective of quickly putting a contract in place with General Atomics/AlliedSignal. In October 1996, PETC issued Burns and Roe Services Corporation (BRSC), with which it had a requirements contract, a Request for Support Services pertaining to the pilot project. BRSC did not have the technical expertise to oversee the intended subcontract with General Atomics; rather, this expertise resided with a sister company, Burns and Roe Enterprises, Inc. (BRE), with which BRSC had a subcontract. In November 1996, BRE issued a letter contract to General Atomics, and General Atomics subcontracted to AlliedSignal.

RESULTS OF INSPECTION

We found that NE did not process the unsolicited proposal it received from General Atomics/AlliedSignal in accordance with established Departmental policies and procedures pertaining to unsolicited proposals. We also found that, although other companies were known to be interested in participating in the Depleted Uranium Hexafluoride Management Program and were known to have technology similar to that proposed by General Atomics/AlliedSignal, a competitive procurement was not pursued. In our view, by pursuing the award of a contract through PETC, NE effectively circumvented Federal requirements designed to promulgate and ensure the appropriate use of competition in contracting. As a result, we recommended that the Director, Office of Nuclear Energy, Science and Technology (1) ensure unsolicited proposals received by NE are processed in accordance with applicable Departmental policies and procedures and (2) ensure that, consistent with Federal requirements for competition in contracting, NE solicits proposals for its Depleted Uranium Hexafluoride Management Program that will foster the Department's pursuit of effective disposition of its depleted UF_6.

MANAGEMENT REACTION

Management agreed that the unsolicited proposal was not handled in accordance with applicable policies and procedures and stated NE intends to use competitive mechanisms in the pursuit of effective disposition of depleted UF_6.

Attachment

cc: Director, Office of Management and Administration
Director, Federal Energy Technology Center
Leader, Audit Liaison Team, CR-2

INSPECTION OF ALLEGED IMPROPRIETIES REGARDING ISSUANCE OF A CONTRACT

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Overview

INTRODUCTION AND OBJECTIVE

The Office of Inspector General (OIG) received an allegation that the Department of Energy (DOE) improperly awarded a multimillion-dollar contract to General Atomics through another contractor, AlliedSignal, for the establishment of a pilot program for mixed waste processing. In particular, concern was expressed about the noncompetitive award of the contract. The Office of Inspections, OIG, subsequently initiated an inspection to review the procurement action.

Inquiries determined that the contract in question was actually for a pilot plant project associated with the Department's program to manage its inventory of depleted uranium hexafluoride (UF_6). Although it had not solicited proposals, in the spring or early summer of 1996 the Office of Nuclear Energy (NE), now the Office of Nuclear Energy, Science and Technology, received a proposal from General Atomics and AlliedSignal to undertake a cooperative pilot-scale demonstration of technologies to address the long-term disposition of DOE's inventory of depleted UF_6. Subsequently, the proposal was funded by using a DOE contractor at the Pittsburgh Energy Technology Center (PETC), now part of the Federal Energy Technology Center (FETC), to issue a subcontract to General Atomics, which then subcontracted to AlliedSignal.

OBSERVATIONS AND CONCLUSIONS

We found that NE did not process the unsolicited proposal it received from General Atomics/AlliedSignal in accordance with established Departmental policies and procedures pertaining to unsolicited proposals. We also found that, although other companies were known to be interested in participating in the Depleted Uranium Hexafluoride Management Program and were known to have technology similar to that proposed by General Atomics/AlliedSignal, a competitive procurement was not pursued. In our view, by pursuing the award of a contract through PETC, NE effectively circumvented Federal requirements designed to promulgate and ensure the appropriate use of competition in contracting.

Background

As a result of its gaseous diffusion (uranium enrichment) activities, DOE is storing approximately 560,000 metric tons of depleted UF_6 at 3 sites. The Department initiated the Depleted Uranium Hexafluoride Management Program to select and implement a long-term management strategy for DOE's depleted UF_6. The first phase of the Program was to be selection of a management strategy, culminating in a Record of Decision that would identify the Department's preferred long-term management strategy. Construction and operation of a pilot plant was not identified as an element of this phase. The second phase of the Program was to be implementation of the management strategy, including selection of specific technologies and uses thereof, which likely would involve the issuance of a request for proposals.

On November 10, 1994, NE published in the *Federal Register* a notice of "Request for Recommendations" that sought recommendations from interested parties for potential uses for the depleted UF_6, as well as for technologies that could facilitate the long-term management of this material. The "Request for Recommendations" specifically stated that it was not for the purpose of obtaining proposals for research, development, and demonstration to be funded by the Government. A technical assessment of the recommendations received in response to the "Request for Recommendations" found 51 of the 57 responses to be technically feasible. Among the responses found technically feasible was a joint submission from General Atomics and AlliedSignal, as well as submissions from other companies with similar technologies, such as Cameco Corporation and COGEMA, Inc. The feasibility analysis was intended to be used by DOE in the development of alternative strategies to be considered in the environmental impact statement that was being developed for the long-term management of depleted UF_6.

Although NE had not solicited proposals, sometime in the spring or early summer of 1996 NE received a proposal from General Atomics and AlliedSignal, similar to their submission under the "Request for Recommendations," to undertake a cooperative pilot-scale demonstration of technologies developed and patented by the proposers.

General Atomics and AlliedSignal would design, fabricate, construct, operate, and evaluate a UF_6 throughput plant at AlliedSignal's Metropolis, Illinois, conversion facility that would produce anhydrous hydrogen fluoride. (See Appendix B.)

Unsolicited Proposal Process Not Followed

DOE Unsolicited Proposal Process

DOE Order 4210.9A, "Unsolicited Proposals," dated January 6, 1993, which was in effect when NE received the General Atomics/AlliedSignal proposal, established policies and procedures pertaining to the receipt, processing, review, and evaluation of unsolicited proposals received by the Department, as well as related documentation requirements. An "unsolicited proposal" was defined as "a written proposal or application that is submitted to an agency on the initiative of the submitter for the purpose of obtaining a contract with or financial assistance from the Government and which is not in response to a formal or informal request (other than an agency request constituting a publicized general statement of needs)." Unsolicited proposals received by any Departmental Element were to be forwarded to the Unsolicited Proposals Coordinator (within the Office of Procurement and Assistance Management) for processing in accordance with the order; unsolicited proposals were to be reviewed in accordance with specified requirements; and funding decisions were to be justified in writing.

Proposal Not Correctly Processed

We believe the General Atomics/AlliedSignal proposal fell within the definition of an unsolicited proposal and was, therefore, required to be processed in accordance with Departmental policies and procedures pertaining to unsolicited proposals. However, NE did not process the proposal in accordance with these policies and procedures; instead, after obtaining input from his staff (which apparently included NE contractor input), the Director of NE had his staff pursue award of a contract based on the proposal. NE contacted PETC, with the objective of quickly putting a contract in place with General Atomics/AlliedSignal. PETC determined that the scope of its requirements contract with Burns and Roe Services Corporation (BRSC) included language that could allow the work to be included under the contract. PETC advised us that under its requirements contract with BRSC, PETC was obligated to offer the work to BRSC first. BRSC decided to accept the work and issue a subcontract to General Atomics, which would then subcontract to AlliedSignal. In October 1996, PETC issued BRSC a Request for Support Services pertaining to the pilot project. However, BRSC did not have the technical expertise to oversee the subcontract with

General Atomics; rather, this expertise resided with a sister company, Burns and Roe Enterprises, Inc. (BRE), with which BRSC had a subcontract. In November 1996, BRE issued a letter contract to General Atomics, and a definitive contract between the two companies was executed effective July 1, 1997.

Management Costs Increased

We learned that management costs associated with the contract increased significantly over initial estimates. DOE funding for this project came from NE and the Office of Environmental Management (EM). BRE's contract with General Atomics was a cost-sharing agreement, with DOE's share not to exceed $3,376,000 of an estimated $6,752,000 project cost. Originally, other costs were estimated as follows: National Environmental Policy Act (NEPA) compliance--$365,000; PETC--$225,900; and BRSC, to include BRE--$389,000. Thus, the initial total estimated management costs for PETC and BSRC were $614,900. We noted BRE's overhead rates were significantly higher than BRSC's overhead rates, which we were told was due to BRE's greater expertise.

As a result of being able to obtain a "Categorical Exclusion," actual NEPA costs only amounted to approximately $50,000. We were told the remaining NEPA funds (approximately $315,000) were retained by PETC, primarily to help cover BRSC costs associated with a 3-month extension to the contract effort. PETC also requested an additional $60,000 to cover management costs. As a result, the total projected management costs for PETC and BRSC became almost $1 million.

In a May 14, 1999, letter, FETC advised that: ". . .the actual management cost for BRSC was $532,241.00 and the actual FETC's cost recovery was $361,354.00 for a total of $893,595.00. All invoices have been paid except for the close-out of the entire contract which may cause an adjustment of about 10% due to the difference between the provisional and actual overhead rates on the BRSC contract." A 10 percent adjustment could add over $89,000 to the management cost, for a total of approximately $983,000.

We did not conduct a detailed review of the financial aspects of this contract. However, on April 5, 1999, the Office of Audit Services, OIG, issued a report on "The U.S. Department of Energy's Funds Distribution and Control System at the Federal Energy Technology Center." The report contains findings and conclusions regarding improvements needed in FETC's funds distribution and control system, such as in its allocation of indirect costs.

Lack of Competition in Contract Award

Competitive Contracting Required

The "Competition in Contracting Act of 1984" established that, in conducting a procurement for property or services, executive agencies shall obtain full and open competition through the use of competitive procedures unless the procurement falls within the parameters of certain specified exceptions, and lack of advance planning shall not be the basis for using other than full and open competition. Further, the Act states that in preparing for the procurement of property or services, an executive agency shall specify its needs and solicit bids or proposals in a manner designed to achieve full and open competition for the procurement; use advance procurement planning and market research; and develop specifications in such a manner as is necessary to obtain full and open competition. Various regulations and directives applicable to the Department have been promulgated that contain similar language and requirements and establish implementing policies and procedures to ensure appropriate competition in acquisitions.

NE Awarded Contract Without Competition

NE had a programmatic need to identify and pursue methods for managing the Department's inventory of depleted UF_6; a programmatic report stated it was likely that proposals pertaining to technologies and uses associated with depleted UF_6 would be solicited; and NE was aware that a number of entities were interested in and capable of participating in the Depleted Uranium Hexafluoride Management Program, as exemplified by the 51 technically feasible recommendations received in connection with NE's "Request for Recommendations." Nonetheless, as described above, NE caused a contract to be awarded, without competition, based on the General Atomics/AlliedSignal unsolicited proposal.

We also noted from documentation obtained from NE that there appeared to have been some concern among NE staff and contractors regarding a noncompetitive award of a contract to General Atomics/AlliedSignal for the pilot project. For example, regarding the feasibility of a sole source procurement to General Atomics, one memorandum stated this would be "difficult and tedious," but best justified through acceptance of an unsolicited proposal from General Atomics if the proposal met certain criteria, e.g. was innovative or unique. However, another memorandum stated that other entities had recommended

means of converting the depleted UF_6 and producing byproducts, including two companies (Cameco and COGEMA) also capable of producing anhydrous hydrogen fluoride, and that: ". . . establishing uniqueness or novelty for the AS/GA [AlliedSignal/General Atomics] process will be difficult." According to the memorandum, preliminary discussions with procurement officials indicated that having a patent was not sufficient justification for a sole source procurement. Also, the memorandum stated that staff will "investigate the use of existing initiatives, such as CRADA [Cooperative Research and Development Agreement] announcements, that could serve as a vehicle for such cooperative work." A memorandum documenting a discussion with EM staff about supporting the General Atomics/AlliedSignal proposal stated that EM was considering work in the area, but intended to use a competitive process since many companies were interested in doing the conversion work.

In addition, NE has considered funding of other unsolicited proposals with application to the Depleted Uranium Hexafluoride Management Program, but without the benefit of having formally solicited proposals as described in acquisition regulations. An NE official advised us that, besides the pilot project, the ideas of at least two other companies were being considered for funding under the Program. Given NE's identified programmatic needs, we believe that by not formally soliciting proposals for work under the Depleted Uranium Hexafluoride Management Program, yet giving funding consideration to unsolicited proposals, NE is not appropriately pursuing full and open competition.

RECOMMENDATIONS

We recommend that the Director, Office of Nuclear Energy, Science and Technology:

1. Ensure that unsolicited proposals received by NE are processed in accordance with applicable Departmental policies and procedures.

2. Ensure that, consistent with Federal requirements for competition in contracting, NE solicits proposals for its Depleted Uranium

Hexafluoride Management Program that will foster the Department's pursuit of effective disposition of its depleted UF_6.

MANAGEMENT COMMENTS

By memorandum dated September 13, 1999, the Director of NE provided the following comments regarding our recommendations:

". . . NE agrees with the IG's basic concern that unsoliticited [sic] proposals must be handled properly. While senior officials at the time of the incident in question did not consider the materials provided by General Atomics to constitute an unsolicited proposal, it is the judgment of current NE management that these materials should have been treated as such. The Director of NE will instruct all staff to critically assess all future written information from outside parties that could result in an award of new work and assume that such materials should be processed through the unsolicited proposal process in accordance with applicable DOE policies and procedures. NE's intention remains to use competitive mechanisms in the pursuit of effective disposition of depleted UF_6.

". . . While NE had a formal process in place to solicit proposals and process unsolicited proposals for its Depleted Uranium Hexafluoride Management Program, NE did not apply that process in this instance. NE's decision not to apply this process was because of the belief at that time the proposal was not an unsolicited proposal within the definition of DOE's unsolicited proposal process. FETC assured the program office that the project, as it was presented by NE, was appropriate for FETC's implementation and in accordance with all rules and regulations."

INSPECTOR COMMENT

We believe management's comments are responsive to our recommendations.

Appendix A

SCOPE AND METHODOLOGY

This inspection was performed at Department of Energy Headquarters and the Federal Energy Technology Center (FETC) from May 1998 to February 1999. We interviewed officials from the Office of Nuclear Energy, Science and Technology; the Office of Procurement and Assistance Management; the Office of the General Counsel; FETC; Burns and Roe Services Corporation; and Burns and Roe Enterprises, Inc. In addition, we reviewed pertinent program documentation and applicable laws, regulations, and directives.

This inspection was conducted in accordance with the "Quality Standards for Inspections" issued by the President's Council on Integrity and Efficiency.

Reconversion of Depleted Uranium Hexafluoride to Uranium Oxide for Subsequent Use or Long-Term Storage

General Atomics
AlliedSignal

Proposal

General Atomics and AlliedSignal, Inc. herein propose to the Department of Energy to undertake a cooperative pilot-scale demonstration of technologies developed by the proposers intended to address the long-term disposition of DOE's inventory of depleted uranium hexafluoride (DUF_6).

Background

The DOE has more than 50,000 large canisters in storage at three major sites which hold about 1.2 billion pounds of DUF_6 tails remaining from more than four decades of uranium enrichment. The United States Enrichment Corporation currently produces about 1500 additional cylinders (about 40,000 pounds) of DUF_6 each year in ongoing enrichment activities. DUF_6 is unstable and hazardous if released, and certain of the stored canisters have either breached or show signs of significant corrosion. A solution is required to stabilize the uranium and provide for safe, long-term storage or disposal and make the uranium available for viable products, such as shielding material for spent nuclear fuel. DOE has called for ideas on how to deal with the DUF_6 and is in the process of evaluating various approaches and options.

Proposed Approach

General Atomics and AlliedSignal have developed a simple chemical process that reconverts the DUF_6 to depleted U_3O_8, the compound from which UF_6 entering the enrichment process was originally made and which is uranium's most stable form. In the process, a byproduct of commercial-quality anhydrous hydrogen fluoride (AHF) is also produced. The method utilizes processes and technologies that are already in use in the production of UF_6 by AlliedSignal and to which General Atomics has contributed its patented AHF recovery technology. The process occurs in a relatively low-temperature regime and therefore does not require exotic materials or equipment. The development accomplished to date under corporate funding has brought the process to a stage that next requires a pilot plant demonstration from which a production plant can reasonably be scaled. It is such a demonstration program that is proposed here.

Statement of Work

Under this project, General Atomics and AlliedSignal will design, fabricate, construct, operate and evaluate a 100-lb/hr UF_6 throughput pilot plant at AlliedSignal's Metropolis, IL, UF_6 conversion facility that will convert natural (as opposed to depleted) UF_6 to U_3O_8 and produce commercial-purity anhydrous HF in a steady state demonstration. Natural UF_6 will be used in the demonstration to remain consistent with license requirements at the AlliedSignal conversion facility. The pilot plant is to demonstrate all necessary steps and processes of the conversion and to produce the data that are required to design a full-size production plant - envisioned to have a throughput of 2100 cylinders (56.5 million pounds) per year. The process will demonstrate acceptable purity of products such that safe storage and/or use is viable. The storage characteristics of the depleted U_3O_8 will also be evaluated.

Cost and Schedule

The estimated cost for this project is $6.8 million and includes an appropriate demonstration period. It is proposed that the costs be shared equally between the proposers, as a team, and DOE, or $3.4 million each. It is further proposed that DOE's maximum obligation is to be $3.4 million with the proposers being responsible for any expenses over $6.8 million total. Rights to the technology are to remain with the proposers.

The total duration of the project is to be approximately fifteen months, the last three of which would be the actual demonstration operation. Once approval is given, a detailed cost and schedule plan will be developed. It is anticipated that the schedule and associated costs will include the latter part of FY96 and all of FY97.

Follow-On Plan

The proposers presume that DOE will ultimately decide, based on the results of this activity as well as other investigations, what direction it will take in the future management of its DUF_6 responsibilities and will subsequently release a Request for Proposal to meet specified requirements.

June 3, 1996

DUF6 PILOT PLANT
Cost Estimate Breakdown
($000)

Operations Costs			
Raw Materials		396	
Direct Variable Costs Utilities, Transportation		17	
Direct Fixed Costs Labor, Maintenance, Supplies		404	
Indirect Fixed Costs D&D, Plant Admin, Inspection		683	
Joint Venture Management		263	
AHF Credit		(11)	
Subtotal Operations			1,752
Construction Costs			
NRC & EPA License/Permits		61	
Pre-Startup Safety Review		15	
Startup Labor & Training		117	
Startup Expenses		185	
Initial Provisioning		50	
Capital Estimate		4,000	
Construction		150	
Building/Facility Mods		100	
Subtotal Construction			4,678
Total Estimate (1994 $)			6,430
Escalated to 1996 $@	1.05		6,752

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