

# *Evaluation*



# *Report*

OFFICE OF THE INSPECTOR GENERAL

**ADVANCED RESEARCH PROJECTS AGENCY  
SOURCE-SELECTION OF HYDROTHERMAL OXIDATION  
OF NAVY SHIPBOARD EXCESS HAZARDOUS MATERIEL**

Report No. 96-024

November 16, 1995

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### **Acronyms**

ARPA  
BAA

Advanced Research Projects Agency  
Broad Agency Announcement



**INSPECTOR GENERAL**  
DEPARTMENT OF DEFENSE  
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ARLINGTON, VIRGINIA 22202-2884



Report No. 96-024

November 16, 1995

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION  
AND TECHNOLOGY  
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL  
MANAGEMENT AND COMPTROLLER)  
DIRECTOR, ADVANCED RESEARCH PROJECTS  
AGENCY

SUBJECT: Evaluation of Advanced Research Projects Agency Source-Selection of  
Hydrothermal Oxidation of Navy Shipboard Excess Hazardous Material  
(Project No. 5PT-8012)

## Introduction

We are providing this report for your information and use. The evaluation is in response to a Defense Hotline complaint concerning the source-selection procedures for the Advanced Research Projects Agency (ARPA) Broad Agency Announcement (BAA) 94-45 for "Hydrothermal Oxidation of Navy Excess Hazardous Material."

BAA-94-45 was issued for research, development, design, fabrication, and shoreside testing of a full-scale hydrothermal oxidation reactor module that had the capacity to destroy 100 pounds per hour of Navy shipboard excess hazardous materials. Discharge from the reactor would be nontoxic to humans and the environment and would meet appropriate international, Federal, state, and local environmental regulations. ARPA planned to fund as many proposals as met the BAA objectives and fell within the \$20 million allocated for the program.

The complainant alleged that:

Evaluation of the BAA proposals was conducted in a very short period, allowing insufficient time for a fair evaluation.

Information concerning the technical aspects of the BAA was not distributed equitably to the potential bidders, penalizing the complainant.

Notice of non-selection was sent to a remotely located subcontractor of the complainant, limiting the time available to file a formal protest.

ARPA misled the complainant and held other bidders to a different standard. No clear objectives or consistently applied criteria were used to evaluate the merits of diverse proposals.

ARPA inappropriately issued a BAA instead of a Request for Proposal and established unrealistic and incompatible goals for the BAA, either knowingly or through incompetence.

## **Evaluation Results**

We reviewed the complainant's allegations contained in his letter and in his interview with us. We did not substantiate the allegations. Enclosure 1 discusses the allegations.

## **Evaluation Objectives**

Our objective for this evaluation was to evaluate the source-selection procedures for BAA-94-45 and to verify the allegations about the ARPA procurement process with respect to the BAA.

## **Scope and Methodology**

The scope of the evaluation included a review of the state of development of hydrothermal oxidation technology. The evaluation began on February 22, 1995 and was completed on July 14, 1995. We reviewed program requirements, selection process documentation, evaluation team members' qualifications, and negotiations conducted for the winning proposals. We did a detailed review of the three winning proposals and the complainant's proposal, independently assessed the winning and losing proposals' technical merit, and assessed the panel's application of source-selection criteria to proposal evaluation.

We reviewed data from the source-selection process, starting with the BAA announcement and continuing through source selection. For background, we reviewed the role of Office of Naval Research participation in establishing the goals of the BAA and the relationship between ARPA project management and its Office of Naval Research contracting agent. We also reviewed the status of a winning bidder's existing contract for a similar system. The dates of the documentation reviewed covered the period of June 1991 to April 1995.

## **Background**

The Navy has been involved with the disposal of shipboard-generated hazardous waste for several years and has been considering the hydrothermal oxidation disposition method. The Navy is also concerned about the treatment of gray and black water, due to increasingly strict disposal regulations. The Office of Naval Research, with other Navy organizations, provided its requirements for hazardous waste disposal to ARPA.

Goals for the BAA were generally very demanding regarding size, weight, and throughput of waste to be processed. Total dimensions of the module containing the unit, including the reactor, all pumps, tankage, and controls, were to be less than 8 feet by 9 feet by 10 feet, approximately half the size of a standard shipping container. Weight was limited to a goal of 8,000 pounds to ensure transportability to and from the deck of a ship by helicopter or crane. The entire unit was to be self-contained with only electrical and plumbing connections to the ship. Input to the reactor was defined as shipboard-generated hazardous materials; however, potential bidders were also to consider gray and black water processing. Operators would deliver the waste to the reactor in 55-gallon steel drums. Water and solid output from the hydrothermal oxidation reactor was to depart in a straightforward manner that required little management and no specially trained personnel. Processing volume of the system was set at 1,000 pounds per day and operation was limited to a maximum of 10 hours per day. The BAA required sufficient automation of system controls to ensure a capability of operation by shipboard personnel with little training and workload.

## **Discussion**

We did not substantiate the allegations. Even though the source selection was conducted in a short time, the evaluations were fair. The same basic information was provided to all potential bidders and answers to bidders' questions were consistent, giving none an advantage. Selection criteria were established before the evaluation and all bidders were held to the same standard. We also determined that because of the demanding goals sought for this application, a BAA was more appropriate than a more definitive specification.

Our evaluation identified the lack of fully documented source-selection worksheets. Subsequent interviews with the source-selection panel members found that they had sufficiently considered the relevant criteria. The source-selection process can be a subject of criticism if the documentation is not very detailed.

## Management Comments

We provided a draft of this report on August 16, 1995. Because this report contains no findings or recommendations, comments were not required, and none were received. Therefore, we are publishing this report in final form.

We appreciate the courtesies extended to the staff. A list of the evaluation team members is inside the back cover of this report. Enclosure 3 lists the distribution of this report.



David K. Steensma  
Deputy Assistant Inspector General  
for Auditing

Enclosures

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## **Allegations and Evaluation Comments**

Our evaluation concluded that no evidence corroborated the allegations. We considered the allegations contained in the letter to the Deputy Inspector General, DoD, and others in our subsequent interview with the complainant. The allegations and our evaluation of their validity are summarized below.

**Allegation 1. Evaluation of the BAA proposals was conducted in a very short period, allowing insufficient time for a fair evaluation.**

**Evaluation Comments.** The Government review panel for BAA-94-45 received the proposals Saturday, November 5, 1994, for reading before the scheduled November 8 through 10, 1994, review panel meeting. The panel was given the evaluation guidelines and a copy of the proposal evaluation worksheet. The panel was asked to review as much of the material as possible over the weekend. They met November 8, 1994, for the three scheduled days of source selection.

All panel members had read most of the 12 proposals before the start of the review meeting. By the conclusion of the meeting, all panelists had read and scored the three winning proposals. Each losing proposal had been read by at least five panel members. Each losing proposal had been scored by at least three panel members.

ARPA explained that the quick turn-around time for the evaluation was an attempt to expedite the contract award process. The time spent and the procedure the panel used were sufficient for a fair evaluation.

**Allegation 2. Information concerning the technical aspects of the BAA was not distributed equitably to the potential bidders, penalizing the complainant.**

**Evaluation Comments.** ARPA provided all interested parties identical information in "Hydrothermal Oxidation Proposer Information Pamphlet." The package consisted of the Broad Agency Announcement; Proposer Information, which provides detailed information on the proposal format; a copy of the required cover sheet; a copy of Standard Form 1411, "Contract Pricing Proposal Cover Sheet;" and a pie chart showing the relative quantities of several different types of excess hazardous materials found aboard a typical aircraft carrier.

The ARPA project manager answered questions asked by several proposers. All bidders were treated equitably. We could not prove the allegation that the complainant received any less or more information that would have placed him at a disadvantage with respect to the proposal evaluation.

Enclosure 1  
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## Allegations and Evaluation Comments

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**Allegation 3.** Notice of non-selection was sent to a remotely located subcontractor of the complainant, limiting the time available to file a formal protest.

**Evaluation Comments.** While the notice of non-selection was sent to a subcontractor of the complainant, Federal Acquisition Regulation 33.103(2) states:

Protests, based on alleged improprieties in a solicitation, which are apparent prior to bid opening or the closing date for receipt of proposals shall be filed prior to bid opening or the closing date for receipt of proposals. *In all other cases, protests shall be filed not later than 10 working days after the basis of protest is known or should have been known, whichever is earlier.* The agency for good cause shown, or where it determines that a protest raises issues significant to the agency's acquisition system, may consider any protest which is not filed timely (*emphasis is added*).

Under the above Federal Acquisition Regulation clause, the complainant had 10 working days to file a protest after becoming aware of the perceived problem and was not hindered by inappropriate routing of the letter of notice.

**Allegation 4.** ARPA misled the complainant and held other bidders to a different standard. No clear objectives or consistently applied criteria were used to evaluate the merits of diverse proposals.

**Evaluation Comments.** The clarifications that were requested by potential proposers, including the complainant, before proposal submittal were reviewed. All responses to clarifications were consistent with the published BAA. In essence, several different potential offerers requested the same clarifications. ARPA responded the same to each clarification. ARPA did not mislead the complainant or any other potential offerer.

The Government review panel was given sufficient documentation to help it impartially evaluate the proposals. BAA-94-45 provided the basis for the evaluation. BAA-94-45 "Evaluation Guidelines" explained the mission and goals of the program. It contained evaluation criteria for each of the four areas being considered. The BAA-94-45 "Proposal Evaluation Worksheet" gave a framework to enable the evaluators to consistently rate each proposal. There was no evidence that ARPA held the offerers to different standards. The information provided to the offerers stated clear goals. The ARPA source-selection panel applied appropriate evaluation criteria that permitted the fair evaluation of proposals containing diverse technical approaches.

**Allegation 5. ARPA inappropriately issued a BAA instead of a Request for Proposal and established unrealistic and incompatible goals for the BAA, either knowingly or through incompetence.**

**Evaluation Comments.** Because of the nature of the work being done by ARPA, most of its solicitations take the form of a BAA in accordance with Federal Acquisition Regulation 6.102(d)(2). ARPA has developed internal BAA policies and procedures based on Federal Acquisition Regulation 35.016. As part of general ARPA procurement process, a decision is made on the type of procurement vehicle to use, based on the nature of the research being considered.

A Request for Proposals could have been more appropriate for this solicitation considering the nature of the shipboard system ARPA desired. The purpose of the system, hazardous waste disposal aboard a ship, made it necessary to impose limitations dictated by the shipboard environment. Those limitations could cause the goals of the BAA to be more appropriate than procurement under a Request for Proposals.

Following the general ARPA procurement process and specific ARPA BAA policy, ARPA decided that a BAA was the appropriate vehicle for the hydrothermal oxidation research. The research goal was to extend the state of the art and to learn the present limits for the desired application. All proposers faced the same uncertainty and were technically challenged to provide a solution for the solicitation. We consider use of a BAA appropriate for this award.

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## **Organizations Visited or Contacted**

### **Department of the Navy**

Office of Naval Research, Arlington, VA  
Carderock Division-Naval Surface Warfare Center, Annapolis, MD

### **Other Defense Organization**

Advanced Research Projects Agency, Arlington, VA

### **Non-Government Organizations**

Institute for Defense Analysis, Arlington, VA  
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Enclosure 2

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## **Evaluation Team Members**

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