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U.S. Department of Energy

Office of Inspector General

Report on The
Fort Hood Solar Energy Project

Report No. ~~IG-126~~ DOB/IG-126

MASTER

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U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL

REPORT ON REVIEW OF FORT HOOD
SOLAR ENERGY PROJECT

APPROVED: /s/ J. Kenneth Mansfield
Inspector General

REPORT NO. IG-126

DATE: July 30, 1980

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SUMMARY

During the period April 1975 to March 1978, the American Technological University (ATU) of Killeen, Texas, was awarded several follow-on contracts by the Division of Solar Energy (DSE), Energy Research and Development Administration (ERDA), which subsequently became the Division of Solar Technology (DST), Department of Energy (DOE). The contracts were to design a solar total energy system for use at Fort Hood, Texas. During the period April 1975 to March 1977, ATU received approximately \$2.0 million to develop the conceptual design of the system. The design ultimately provided by ATU to ERDA/DSE in March 1977, was considered by ERDA to be both unresponsive and unacceptable. An acceptable conceptual design was subsequently developed in a six month period by the Westinghouse Electric Corporation for approximately \$300,000. Although they failed to provide an acceptable conceptual design, ATU was awarded a contract in the amount of \$1.99 million by DOE/DST to develop the follow-on preliminary design of the system, utilizing Westinghouse as a subcontractor and the conceptual design developed by Westinghouse.

A review encompassing the period of the project from January 1975 to March 1978, was conducted by the Office of Inspector General (IG), DOE. The review examined both the management of the project by ATU and ERDA personnel and the award and administration by ERDA of the contracts to ATU for support of the project. The IG review found that: (1) there was a lack of continuity in the management of the project by both ATU and ERDA, (2) ERDA failed to maintain control of the project and failed to issue specific project direction to ATU, (3) ERDA failed to follow existing procurement regulations for the review and acceptance of unsolicited proposals from ATU, (4) the ERDA Headquarters Program Manager and the Contract Administrator for the conceptual design phase of the project had failed to ensure that all the tasks which

had been funded were performed by ATU, and (5) the decision by the Director, ERDA/DSE, to award successive contracts to ATU was questionable in view of ATU's performance on the project.

Based upon our analysis of the facts, we recommend that:

(1) The Under Secretary:

(a) direct a review of existing policies and procedures with respect to the selection and training of DOE program managers and Government Technical Representatives, and revise, update, and strengthen such directives where required. Furthermore, assignment to either of these positions of responsibility should be based upon a demonstrated knowledge of the roles and responsibilities of the functions of program management and contract administration.

(b) direct the preparation of a single document or handbook for use by program managers and Government Technical Representatives which delineates their roles and responsibilities with respect to project management and contract administration, and their relationships with respect to the Contractor and the Contract Administrator.

(2) The Chief Financial Officer:

initiate a review of existing policies and procedures with respect to the selection and training of DOE contract administrators and revise, update and strengthen the directives where necessary.

BACKGROUND

As a result of a proposal submitted to the National Science Foundation (NSF), the American Technological University (ATU) received a grant in 1974 in the amount of \$139,700 to study the feasibility of solar total energy conversion systems for use at Fort Hood, Texas. Shortly after its formation in January 1975, the Energy Research and Development Administration (ERDA) became responsible for the grant effort; Phase I of what subsequently became a multi-phased effort. An unsolicited proposal from ATU resulted in ERDA awarding ATU a Special Research Support Agreement (SRSA) and two subsequent modifications to develop the conceptual design of a system to provide energy for a troop housing complex at Fort Hood. This conceptual design effort, Phase II, was funded in the amount of \$680,000, for the period April 1, 1975, to November 30, 1976. A follow-on unsolicited proposal from ATU resulted in ERDA awarding ATU a contract in the amount of \$2.3 million for the development of the follow-on preliminary design of the system. This effort, Phase III, was initially to be completed during the period November 23, 1976, to September 30, 1977, but two subsequent contract modifications reduced the funding to ATU to \$1.3 million, reduced ATU's role to one of site coordination and data collection, and extended the contract period to February 28, 1978. A subsequent unsolicited proposal from ATU resulted in DOE awarding a follow-on contract to ATU to conduct the preliminary design effort which ATU never had begun under Phase III. This latest contract, Phase III-A, was for \$1.99 million for the period March 1 to October 30, 1978, and allowed DOE the option of extending the contract for a definitive design effort. When ATU failed to develop an acceptable conceptual design in Phase III, ATU's role on the project was reduced and contracts were

awarded to the Westinghouse Electric Corporation and the TRW Systems and Energy Group in the amount of approximately \$300,000 each, for them to develop, in a design competition, a conceptual design for the troop housing complex. The period of this competition was from May to October 1977.

Scope of Review

The IG review concerned the management and supervision of the Fort Hood project by both ATU and ERDA personnel and the award and administration by ERDA of contracts to ATU in support of the project. The review covered the period of the project from January 1975 to the award of the Phase III-A contract in March 1978.

FINDINGS AND CONCLUSIONS

1. Numerous changes in management personnel by ATU and ERDA led to a lack of continuity on the project.

During the period January 1975 to March 1978, there were a total of five Project Managers/Directors assigned by the American Technological University (ATU) to manage the project. Their backgrounds and areas of expertise varied considerably, from purely scientific, to primarily engineering, to one individual with no apparent technical background. During the same period, ERDA's Division of Solar Energy (DSE) assigned a total of four Headquarters Program Managers, three Government Technical Representatives (GTR's), and various technical monitors from Sandia Laboratories to the project. This frequent change in managers by both ATU and ERDA resulted in (1) numerous changes in project direction, (2) personality conflicts leading to communication gaps between ERDA and ATU, (3) lack of project continuity resulting from successive managers not being fully knowledgeable of actions and decisions by their predecessors, and (4) guidance being issued to ATU from as many as three different sources; the Headquarters Program Manager, the GTR, and Sandia Laboratories.

To illustrate the problem, in February 1977, the GTR discovered that ATU had never been directed to bring their conceptual design into conformance with the Solar Total Energy Program (STEP) Plan. The GTR had assumed from the time he had been assigned to the project in November 1976, that ATU's conceptual design effort was conforming to the guidelines established by the STEP plan. A lack of communication between the GTR and the ATU project manager contributed to the failure of the GTR to know what ATU was doing on the project,

and led to his discovery in February 1977, that ATU had been developing a conceptual design which was totally unresponsive to ERDA's requirements.

Comments to our draft report by the Deputy Assistant Secretary for Solar Energy failed to address the thrust of the IG's finding, specifically that changes in key project personnel at both ATU and ERDA led to a loss of project control by ERDA and failure by ERDA, and subsequently DOE, to know where ATU was taking the design effort. The Deputy Assistant Secretary stated that contract documents delineate the responsibilities of both parties, while the people involved "provide the needed interpretation of the contract and guidance in areas where the contract is not specific." The history of the Fort Hood project exemplifies that frequent changes in key project personnel led to varying interpretations of the contract and guidance, and eventually led to an unacceptable product. The Deputy Assistant Secretary's specific comments are attached (Appendix A, Page 1).

2. ERDA failed to maintain control of the project and failed to issue specific project direction to ATU.

In the early stages of the project, ERDA's Division of Solar Energy (DSE) was uncertain as to the system design and system size which would fulfill their requirement. They initially envisioned a system sized at 200 Kilowatts (KWe), but agreed to a proposal by the American Technological University (ATU) to consider larger sized systems. ERDA/DSE also agreed to an ATU request for greater flexibility under the contract in order to freely examine various design configurations. By agreeing to ATU's requests for flexibility and

allowing ATU to consider larger sized systems, ERDA established an environment which enabled ATU to pursue their own objectives on the project with minimal control from ERDA/DSE.

It appeared that ATU had two objectives which directed them toward designing a larger system than ERDA envisioned. There appeared to have been a commitment by ATU to the Army at Fort Hood to design a system large enough to benefit Fort Hood in return for the Army's support of ATU and the project. In addition, ATU, being a newly established technical institution, desired to be at the forefront of the solar technology field, and therefore wanted a system large enough to attract significant interest.

There was no indication that ERDA was aware of ATU's desire to develop a large sized system. The ERDA/DSE approach was to develop general design parameters and allow ATU to continually refine them until a conceptual design could be developed which would fulfill ERDA's requirements. ERDA/DSE adopted this approach because of their uncertainty of what they wanted for a system and the belief that as the design effort progressed, their requirements would become clearer.

ATU proposed, and ERDA/DSE accepted, a set of initial design parameters which were used by ATU to develop the baseline conceptual design for a system sized at 1.0 - 1.5 Megawatts (MWe). In order to give ATU the flexibility they desired, ERDA/DSE adopted the approach of providing direction to ATU using "soft" guidance in the form of suggestions and recommendations. By issuing this "soft guidance" instead of directing ATU through contract modification and written direction, ERDA/DSE allowed ATU to only follow the guidance which favored large sized systems, and to ignore suggestions to consider smaller systems.

In June 1976, ATU's baseline conceptual design was reviewed by an independent panel which recommended that the design parameters agreed to by ERDA/DSE had constrained ATU's design effort. The first written guidance to ATU on the project was issued in August 1976, by Sandia Laboratories. The Sandia guidance deleted or modified several of the general design parameters, but was so loosely written that after making several engineering assumptions, ATU concluded that the guidance had no impact on their conceptual design or the system size. ATU's conclusion was not provided to ERDA/DSE, which believed that Sandia's guidance would result in ATU designing a smaller sized system.

During the same period, August 1976, Sandia developed the Solar Total Energy Program (STEP) Plan, which, to conserve resources, suggested the development of several Large Scale Experiments (LSE's) in the 200-500 KWe range, in lieu of the larger, more expensive systems. ERDA/DSE unofficially adopted the STEP plan concept and designated the Fort Hood project as an LSE. Instead of being directed to conform to the STEP plan and reduce the size of the proposed system, ATU was only provided a copy of the plan for review and comment.

Thus, at the end of Phase II, ERDA/DSE believed that the Sandia guidance and the STEP plan would result in ATU designing a system much smaller than the 1.3 MWe system that ATU had been proposing, when in fact, ATU had received nothing which, in their opinion, changed their design at all.

ATU's unsolicited proposal for Phase III, the follow-on Preliminary Design Phase, and their October 1976 Draft Final Phase II Report, both contained the conceptual design for the 1.3 MWe system which ERDA/DSE believed had been overtaken by the Sandia guidance and the STEP plan. This belief, and assurances

from ATU that efforts in the early period of Phase III would include a reevaluation of ATU's conceptual design in view of the guidance from Sandia and the STEP plan, caused ERDA/DSE to include ATU's Phase III proposal in the Statement of Work for the Phase III contract. ERDA/DSE believed that the conceptual design refinement effort proposed by ATU would result in the conceptual design of a smaller sized system, when in fact, ATU had already decided on the 1.3 MWe system and was using the refinement period to convince the new ATU Project Manager that the design was valid.

In late February 1977, ATU presented the results of its efforts during the refinement period, which had begun in November 1976; the beginning of Phase III. ATU's presentation, which consisted of the conceptual design and system size (1.3 MWe) that ERDA/DSE had thought was overtaken by the STEP plan, was deemed unacceptable by ERDA.

In comments to our draft report, the Deputy Assistant Secretary for Solar Energy indicated that "the 'soft guidance' referred to in the text was a direct result of the rapidly developing technology which was evolving during this period...." The IG acknowledges the need for allowing the contractor a certain degree of flexibility on contracts in the field of research and development. However, the "soft guidance" approach was utilized on the Fort Hood project to such an extent that ATU was able to use the project to pursue their own objectives. Additional comments by the Deputy Assistant Secretary for Solar Energy are attached (Appendix A, Page 1).

3. ERDA failed to follow existing procurement regulations for the review and acceptance of unsolicited proposals submitted by ATU for Phase III and Phase III-A of the project.

American Technological University's (ATU's) unsolicited proposals for Phase III and Phase III-A were submitted in August 1976 and August 1977 respectively, during the period when ERDA-PR Temporary Regulations Nos. 21 and 26, which concerned the processing of unsolicited proposals from educational institutions, were in effect. The following subparts were violated by ERDA's Division of Solar Energy (DSE) in the acceptance of ATU's proposals:

(1) Subpart 9-4.5202 (b) (1) stated that a proposal may be accepted if it was submitted solely on the proposer's initiative. ATU's Phase III proposal was a follow-on to their Phase II effort and had been discussed with ERDA officials prior to its submission. There was reason to believe that Sandia personnel aided ATU in the preparation of their proposal.

(2) Subpart 9-4.5203-3 required unsolicited proposals from educational institutions to be submitted to a central control point within ERDA; the Office of University Programs. ATU's Phase III proposal was initially submitted to ERDA/DSE, with the revised proposal submitted to the Albuquerque Operations Office, ERDA. There was no indication that it was ever provided to the Office of University Programs, ERDA.

(3) Subpart 9-4.5203-4 required the project official to prepare a "Justification for Acceptance of Unsolicited Proposal," if he recommended acceptance of the proposal, and required a copy

of the Justification to be appended to the Procurement Request. The Headquarters Program Manager did not prepare a Justification, even though he approved the proposals, and none was appended to the Procurement Requests sent to the Albuquerque Operations Office authorizing contract negotiations with ATU. The Subpart also required the Justification to be provided to the Procurement Division's Senior Procurement Advisor (Headquarters), ERDA, and the Office of General Counsel, ERDA, for review and concurrence. There was no indication that this was ever done.

(4) ERDA-PR 9-4.5106-2, dated October 7, 1975, required the program office to evaluate the technical aspects of the proposal. The Headquarters Program Manager initiated a technical review of ATU's Phase III-A proposal, but prior to its completion, the Director, ERDA/DSE, accepted ATU's proposal as a basis for negotiation of a contract.

The Program Manager exceeded his authority in Phase II by directing ATU to prepare a draft Request For Proposal (RFP) to solicit bids for the engineering effort to be accomplished during Phase III. At his direction, ATU prepared a draft RFP. The cost of the RFP preparation was charged to Phase II funds by ATU, and was accomplished without the knowledge of the Contract Administrator and despite any requirement under the Phase II contract for the preparation of such a document.

4. The Headquarters Program Manager and the Contract Administrator failed to ensure that all the tasks funded under Phase II had been performed by ATU.

The Special Research Support Agreement for Phase II was administered by the Oak Ridge Operations Office, ERDA, and required the American Technological University (ATU) to develop, among other things, a Systems Simulation Model (computer model). Modification No. 2 to the Support Agreement extended the period of Phase II from October to November 1976, and provided funds for ATU to install, test, and operate a Solar Energy Test Module (SETM). Included in Modification No. 2 were funds for ATU to perform specific site work, e.g., building renovations, which had been addressed in ATU's proposal for the modification.

In October 1976, ATU submitted a draft Phase II Final Report which, since it was prepared prior to Modification No. 2, did not address any of the tasks funded by Modification No. 2. In April 1977, ATU submitted a Phase II Final Report which was reviewed from a technical standpoint by Sandia Laboratories. The technical review indicated that some tasks funded under Phase II had not been performed, or had been performed after Phase II ended. Both the Headquarters Program Manager and the Contract Administrator from the Oak Ridge Operations Office were aware of the Sandia findings, yet neither individual attempted to verify what tasks ATU had actually performed. As a result, the decision was made to close out the Phase II Support Agreement despite the indication that not all the work had been done.

Our review of the results of ATU's efforts under Phase II established that:
(1) the April 1977 ATU Phase II Final Report considered acceptable to close

out Phase II was identical to the October 1976 draft ATU Phase II Final Report previously considered unacceptable by ERDA, (2) the System Simulation Model funded under Phase II was not developed, (3) site preparation and building renovations funded by Modification No. 2 in the amount of \$25,000 had not been performed, and (4) some tasks funded by Modification No. 2 were completed during Phase III but charged to Phase II funds.

The situation whereby tasks funded by Phase II were not performed or completed prior to the end of Phase II could have been corrected by either: (1) issuing a Modification No. 3 to the Phase II Support Agreement to provide an extension to Phase II and additional funds to complete the tasks not performed by the end of Phase II, or (2) issuing a Modification No. 3 to the Phase II Support Agreement to delete the tasks not performed by ATU under Phase II, and adding those tasks and additional funds to the contract awarded to ATU for Phase III. The Contract Administrator did neither.

In his comments to our draft report, the Deputy Assistant Secretary for Solar Energy indicated that several items under the second modification to the "grant" had not been completed, but because the funding to ATU had been under a "grant" and ATU was a university, the government did not have a basis to enforce completion of the items. IG questions the wisdom of DOE having made additional contract awards to ATU when there were clear signs that the University was not performing work that had already been funded. The Deputy Assistant Secretary's comments are attached. (See Appendix A, Page 2.)

5. ERDA continued to award successive contracts to ATU for the project despite ATU's questionable performance.

Early in Phase II there was concern by ERDA personnel that the American Technological University (ATU) did not possess the engineering capability and experience required to manage and conduct a large scale project such as that envisioned for Fort Hood. ATU's effort in Phase II was conducted by part-time consultants and subcontractors hired specifically to work on the project. Their effort resulted in a draft Phase II Final Report dated October 1976, which contained both a conceptual design and a system size which was unacceptable to ERDA's Division of Solar Energy (DSE).

ATU's initial unsolicited proposal for Phase III was evaluated by independent reviewers and considered unacceptable. The Headquarters Program Manager for Phase III returned the proposal to ATU with the reviewers' comments, and suggested the proposal be revised and resubmitted. Prior to the receipt of a revised proposal, the Director, ERDA/DSE, directed the Albuquerque Office to negotiate a contract with ATU for Phase III pending receipt of an acceptable revised proposal. The ATU revised proposal was used as a basis for both the negotiation and award of the Phase III contract to ATU, and was, with minor exceptions, the identical proposal previously found unacceptable by the reviewers.

At the project design review on February 25, 1977, ATU presented the results of their efforts under the conceptual design refinement portion of Phase III. The conceptual design and system size presented by ATU were considered unacceptable by the Government Technical Representative and ATU was given until

March 30, 1977, to develop an acceptable design. The conceptual design and system size presented by ATU on March 30, 1977, were again considered unacceptable by the Government Technical Representative. The March 1977 determination that ATU's effort had failed to produce an acceptable design led to ERDA's decision to reduce ATU's role on the project to site coordination and data collection. The need to salvage the project led to a decision by the Director, ERDA/DSE, to authorize the Albuquerque Office to award contracts to Westinghouse and TRW to develop, in a design competition, a conceptual design for the Fort Hood project; the very design effort which ATU had failed to accomplish.

In August 1977, ATU submitted an unsolicited proposal directly to the Director, ERDA/DSE, in which they proposed to develop the preliminary design of the Fort Hood project utilizing the winner of the design competition as a subcontractor for the engineering effort. The Headquarters Program Manager initiated a technical review of ATU's proposal, but prior to the completion of the review, the Director, ERDA/DSE, accepted ATU's proposal as a basis for contract negotiations for Phase III-A, a repeat of the preliminary design effort. A contract was subsequently awarded to ATU for Phase III-A over the objections of the Government Technical Representative, the Headquarters Program Manager, and the technical monitor from Sandia Laboratories.

When asked about his decision to award the Phase III-A contract to ATU, the Director, ERDA/DSE, acknowledged that ATU's performance had grown steadily worse as the project had progressed and that ATU had failed in their efforts as indicated by the reduction of their role in Phase III. However, he offered the following rationale for keeping ATU on the project and awarding them the Phase III-A contract:

(1) To commercialize solar energy, he felt that the project should be conducted by an activity from the Industrial sector, instead of the National Laboratories. The activity should be interested to remain on the project through its different phases and thereby gain the expertise and establish the continuity necessary to repeat the project on other installations within the Department of Defense.

(2) He could have sought contractors on a competitive basis to conduct the project, but felt that would have attracted firms which were only interested in chasing contracts. Such firms were not likely to stay with succeeding phases of the project and thus the necessary expertise and continuity would not be established.

(3) He felt that ATU's relationship with the Army at Fort Hood and the need for developing expertise and providing continuity on the project were so important to the project's success, that he had no other choice but to either maintain ATU on the project or cancel the project.

(4) In their proposal for Phase III-A, ATU had recognized that they had previously failed on the project, but had established a new management team and wanted another opportunity to conduct the project. He realized that he was possibly gambling with Federal funds, but decided to award the Phase III-A contract to ATU since he felt that there would be sufficient safeguards in the Phase III-A contract to prevent a problem if ATU failed again.

By accepting ATU's unsolicited proposal for Phase III, the Director, ERDA/DSE, violated Subpart 9-4.5203-5, ERDA-PR Temporary Regulation No. 21, dated July 23, 1976, and by accepting ATU's unsolicited proposal for Phase III-A, he violated ERDA-PR 9-4.910 (c), dated September 26, 1977; both of which stated that "when the substance of an unsolicited proposal is available to ERDA without restriction from another source, the proposal shall be rejected."

In his comments to our draft report, the Deputy Assistant Secretary for Solar Energy indicated that "It was the government's considered opinion that ATU was the best choice...." The IG found that as the project progressed, fewer and fewer ERDA/DOE project personnel felt that ATU could successfully perform the work, either from a managerial or technical standpoint. In fact, of all the ERDA/DOE project personnel contacted by the IG, only the Director, ERDA/DSE, felt that ATU remained the best choice for the project, and even he had reservations in view of ATU's past performance. The primary reason for ATU being considered the "best choice" appeared to be what ERDA/DOE perceived to be ATU's "special relationship" with the Army at Fort Hood, which the Director, ERDA/DSE, felt was the key to success of the project. The Deputy Assistant Secretary's specific comments are attached. (See Appendix A, Page 2.)

RECOMMENDATIONS:

We recommend the following:

(1) The Under Secretary:

(a) direct a review of existing policies and procedures with respect to the selection and training of DOE program managers and Government Technical Representatives, and revise, update, and strengthen such directives where required. Furthermore, assignment to either of these positions of responsibility should be based upon a demonstrated knowledge of the roles and responsibilities of program management and contract administration.

(b) direct the preparation of a single document or handbook for use by Program Managers and Government Technical Representatives which delineates their roles and responsibilities with respect to project management and contract administration, and their relationships with respect to the Contractor and the Contract Administrator.

In comments to our draft report, the Under Secretary agreed with our recommendations, and indicated steps which have been, or will be taken to address the problem areas addressed in our report. We are pleased to note the positive steps being taken in this regard. However, we must point out that not only must DOE Orders be promulgated to correct deficiencies in DOE program management, but, in order to achieve the desired effect, attention must be given to establishing a means of ensuring compliance with the Orders. Specific comments by the Under Secretary are attached. (See Appendix B, Page 1.)

(2) Director, Procurement and Contracts Management:

initiate a review of existing policies and procedures with respect to the selection and training of DOE contract administrators and revise, update and strengthen the directives where necessary.

In comments to our draft report, the Director, Procurement and Contracts Management, supported our recommendation that policies and procedures with respect to the selection and training of DOE contract administrators needed to be reviewed, revised and strengthened, and indicated that a Procurement Orientation Program had recently been initiated at DOE Headquarters. We have reviewed the program outline and handouts, and consider the program a good first step in orienting Headquarters personnel to the procurement area. However, we feel that the program should be expanded to provide more emphasis on past problem areas and "lessons learned" and eventually offered to DOE personnel serving in field activities. We also encourage the establishment of additional training programs which are oriented more to specific areas of the procurement and contracting process. Additional comments by the Director are attached. (See Appendix C, Page 1.)

APPENDICES

APPENDIX A - Comments on draft report from the Deputy Assistant Secretary for Solar, Conservation and Solar Energy

APPENDIX B - Comments on draft report from the Under Secretary

APPENDIX C - Comments on draft report from the Director of Procurement and Contracts Management

U.S. DEPARTMENT OF ENERGY
memorandum

DATE MAR 19 1980

REPLY TO ATTN OF CS-68 (G. Braun)

SUBJECT IG Report on Review of Fort Hood Solar Total Energy Project

TO J. K. Mansfield, Inspector General

After carefully reviewing your report and its findings and conclusions, I would like to comment on each of them separately below.

1. Numerous changes in management personnel by the American Technological University (ATU) and the Energy Research and Development Administration (ERDA) led to a lack of continuity.

It is true that the responsibility for the National Solar Program has resided with three different agencies during the course of the government's contract with ATU and that key government personnel have changed numerous times. This, however, is characteristic of a rapidly growing and evolving program. During this period (FY 1974 - FY 1978) funding for the national solar thermal program grew from \$2.2M to \$64.6M. As a result, numerous organizational and personnel changes have occurred. There was, however, a contract between ATU and the government covering the tasks to be completed. While it is important to maintain key personnel on the part of both the government and its contractors, the purpose of a contract is to delineate the responsibilities of both parties. In that sense people provide the needed interpretation of the contract and guidance in areas where the contract is not specific. The contracting officer or his designate, of course, are the only ones that can effect a change in the contract.

2. ERDA failed to maintain control of the project and failed to issue specific project direction to ATU.

The "soft guidance" referred to in the text was a direct result of the the rapidly developing technology which was evolving during this period, both on the part of the contractor and the government. Tasking the contractor to perform trade-off analysis to assist the government in clarifying its requirements is consistent with the R&D nature of the contract.

3. ERDA failed to follow existing procurement regulations for the review and acceptance of unsolicited proposals submitted by ATU for Phase III and Phase III-A of the project.

I have no comment. The Director, Procurement and Contracts Management, is responding to this finding.

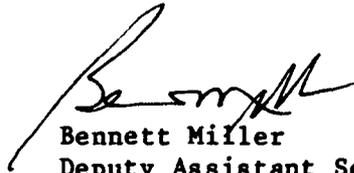
4. The Headquarters Program Manager and the Contract Administrator failed to ensure that all the tasks funded under Phase II had been performed by ATU.

At Headquarters request, Sandia Laboratories visited the Fort Hood site to determine the status of the specific items contained in the second modification to the grant. The fact that several of the items had not been completed was brought to the attention of the Contracting Officer. It was concluded that because of the nature of the funding instrument (grant) and the type of institution involved (University), the government did not have a basis to enforce completion of the items. The issue was not pursued.

5. ERDA continued to award contracts to ATU for the project despite ATU's questionable performance.

ATU was awarded successive contracts for the Fort Hood project as a result of their unique involvement with the Department of the Army and the Fort Hood installation. ATU was the leader of a team of contractors. It was the government's considered opinion that ATU was the best choice to lead the team for a project at Fort Hood.

I believe that the report can provide a valuable record of events. The events, however, need to be put in perspective and I believe that the preceding comments will help accomplish that objective.



Bennett Miller
Deputy Assistant Secretary
for Solar Energy (Designate)
Conservation and Solar Energy



Department of Energy
Washington, D.C. 20585

APR 21 1980

MEMORANDUM FOR Inspector General
FROM: Worth Bateman 
SUBJECT: IG Report on Review of Fort Hood Solar Total Energy Project

The subject draft report has been reviewed by this office in accordance with your February 22, 1980, request. Comments on the accuracy of the draft report were provided separately by Conservation and Solar Energy and by Procurement and Contracts Management. However, I would like to inform you of actions being taken relative to your recommendations concerning the Office of the Under Secretary.

You recommended that the Under Secretary "direct a review of existing policies and procedures with respect to the selection and training of DOE program managers and Government Technical Representatives, and revise, update, and strengthen where required. Assignment to either of these positions of responsibility should be contingent upon a demonstrated knowledge of the roles and responsibilities of program managers and Government Technical Representatives with respect to program management and contract administration."

I agree that we need to strengthen our policies and procedures with respect to training and selection of project managers and program managers and, in fact, the total Departmental project management system. As an initial step in accomplishing this, the Secretary directed a review of our project management policies and procedures and this has recently been completed. The resulting report (DESM 79-1) provided extensive recommendations for changes to strengthen and simplify procedures, establish clear lines of responsibility, ensure appropriate delegation of authority, and establish accountability for management performance. Activities are now underway to implement these recommendations. The key points are covered in two draft DOE Orders which have been issued by the Deputy Secretary as interim guidance pending completion of the formal coordination process: DOE 5700.1 Major System Acquisitions and DOE 5700.3 Major System Acquisition Procedures.

We have also instituted Departmental project management training programs. These programs, supplemented by Procurement's "Orientation Program," address the concerns identified in your recommendations. The introductory series of courses in the Core Training Program and the Seminars for Senior Project Managers have been attended by approximately 1,500 DOE personnel already. A Project Management Skills Training Program (Intermediate Level) is planned for initiation early in FY 1981.

You further recommended that the Under Secretary "direct the preparation of a single document or handbook for use by program managers and Government Technical Representatives which delineates their roles and responsibilities with respect to project management and contract administration, and their relationships with respect to the Contractor and the Contract Administrator."

These items are to be addressed in the DOE Project Management Manual. Work is well along toward completion of this document. It will expand the basic material provided in DESM 79-1, DOE 5700.1 and DOE 5700.3. It will clearly delineate the roles and responsibilities of those personnel responsible for project implementation. This manual and these other basic documents will be used in the training programs as rapidly as they are developed in order to keep the training materials current with the most recent policy and procedural developments in this very important area.

Thank you for the opportunity to comment on the draft.

U.S. DEPARTMENT OF ENERGY

memorandum

DATE MAR 10 1980

REPLY TO PR-44 (Michelsen)
ATTN OF

SUBJECT IG Report on Review of Fort Hood Total Energy Project

TO J. K. Mansfield, IG-1

The draft report, subject as above, has been reviewed by Procurement in accordance with your request of February 22, 1980. As a result of that review, this organization declines to comment on Findings and Conclusions, Numbers 1, 2, 4, and 5 since the issues considered under those headings were technical rather than procurement in nature. However, with regard to Findings and Conclusions, No. 3, we agree with the accuracy of the draft report. Specifically, based on information available to this office, the Procurement Division's Senior Procurement Advisor (Headquarters), ERDA, was not requested to review and concur in the "Justification for Acceptance of Unsolicited Proposal" which would have been required under Subpart 9-4.5203-4.

Emphasized in each of the report's recommendations is the need to provide appropriate training to DOE employees; to update and strengthen those skills necessary to effectively manage and administer the Department's programs. The Procurement and Contracts Management Directorate supports such a recommendation and, in fact, has recently instituted a Procurement Orientation Program which has been enthusiastically endorsed by those organizations which have been exposed to the lectures and materials.

Thank you for the opportunity to comment on the draft.

M. J. Tashjian
for M. J. Tashjian, Director
Procurement and Contracts
Management Directorate