



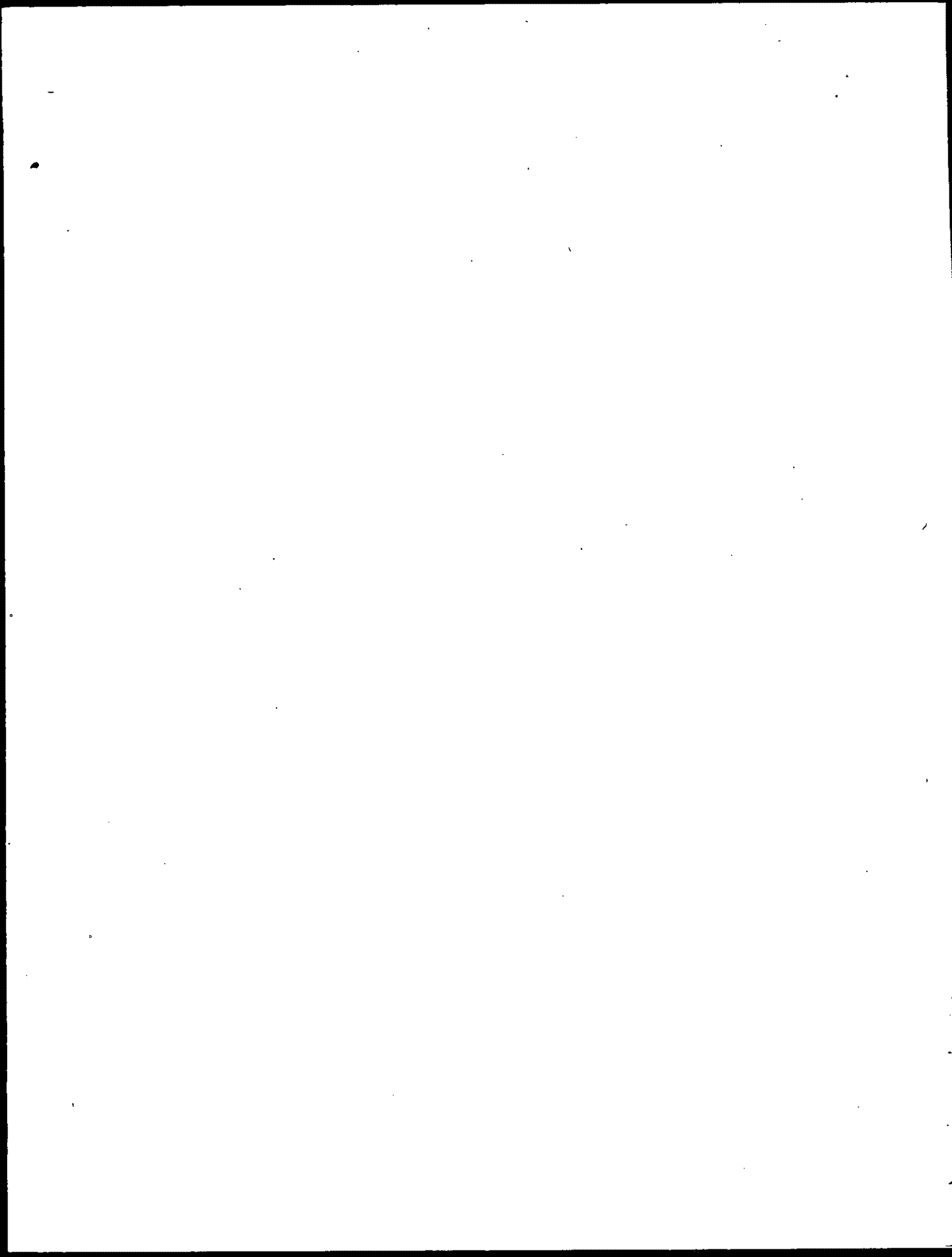
**Office of Inspector General**  
**SURVEY REPORT**

**SURVEY REPORT ON CONTRACTING  
ACTIVITIES AT THE ATMOSPHERIC RESEARCH  
AND EXPOSURE ASSESSMENT LABORATORY**

**E1JBB2-11-0038-2700015**

**SEPTEMBER 30, 1992**

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 30 1992

OFFICE OF  
THE INSPECTOR GENERAL

**MEMORANDUM**

**SUBJECT:** Survey Report on Contracting Activities at the  
Atmospheric Research and Exposure Assessment Laboratory  
Survey Report No. E1JBB2-11-0038-2700015

**FROM:** Kenneth A. Konz *Kenneth A. Konz*  
Assistant Inspector General for Audit

**TO:** Erich W. Bretthauer  
Assistant Administrator  
for Research and Development

This survey report presents the results of our recently completed survey of contracting activities at the Atmospheric Research and Exposure Assessment Laboratory (AREAL), Research Triangle Park (RTP), North Carolina. The survey disclosed indications of significant problems in the administration of the laboratory's on-site support contract that the Office of Inspector General (OIG) has identified in recent audit reports. These reports include EPA's Management of Computer Sciences Corporation Contract Activities (audit report no. E1NME1-04-0169-21000295, dated March 31, 1992) and Contracting Activities at Environmental Research Laboratory - Duluth (audit report no. E1JBF1-05-0175-2100443, dated July 7, 1992). Also, since similar issues were addressed in a recent ORD Acquisition Management Improvement Initiative (AMII) internal review of AREAL and corrective actions are ongoing or planned, we do not believe an audit of the laboratory's contract administration activities is warranted at this time.

The potential deficiencies cited in this survey report were not fully developed and supported by audit verification. However, we have identified these issues in order to bring them to management's attention for such action as it deems necessary.

In accordance with EPA Order 2750, we have designated the Assistant Administrator for Research and Development as the action official for this report. As the action official, you are asked to provide this office with a written response to the report within 90 days of the report date. For corrective actions planned but not completed by the response date, reference to

# 36196642

specific milestone dates will assist this office in deciding whether to close this report.

We appreciate the cooperation extended to our auditors during this survey. If you or your staff has any questions concerning this report, please contact John M. Bishop, RTP Audit Manager, on (919) 541-1028.

#### SURVEY OBJECTIVES

The overall objective of this survey was to make a preliminary assessment of the adequacy and appropriateness of the award and administration of AREAL contracts.

We reviewed the administration of AREAL contracts for indications of whether:

- personal services relationships existed;
- the invoice review process was adequate to ensure that EPA paid for reasonable costs;
- technical directives were sufficiently detailed and authorized;
- work performed was within the overall contract scope of work;
- conflicts of interest existed between program officials and contractor personnel;
- there was duplication of services among contractors; and
- contract award fees were reasonable.

We also reviewed the procurement of Small Business Administration (SBA) Section 8(a) contracts to determine whether they may have been awarded to avoid competition. We reviewed the award of other contracts for evidence of lack of competition.

#### SCOPE OF SURVEY WORK PERFORMED

We reviewed RTP-Contracts Management Division (CMD) files for AREAL's four largest competitively awarded contracts and for five sole-source contracts. Only contracts active in fiscal 1991 were considered for review. We reviewed the following contracts:

<u>Contract Number</u>	<u>Contractor</u>	<u>Maximum Expected Value (millions)</u>
68-D0-0106	Mantech Environmental Technology Inc.	\$50.3
68-02-4544	Research Triangle Institute	17.3
68-02-4451	Environmental Science and Engineering, Inc.	14.4
68-D1-0009	Research Triangle Institute	9.6
68-D8-0063	Research and Evaluation Associates, Inc.	4.5
68-D1-0111	Research and Evaluation Associates, Inc.	3.0
68-D8-4546	Research and Evaluation Associates, Inc.	1.8
68-02-4475	American Scientific International Corporation	.6
68-D1-0154	Envair	<u>.08</u>
Total Maximum Expected Value		<u>\$101.58</u>

Based on our review of CMD files, we selected the Mantech and Environmental Science and Engineering (ESE) contracts for more detailed review of contract administration issues. This review primarily focused on fiscal 1991 and 1992 activities. In reviewing these contracts, we interviewed CMD Contracting Specialists and laboratory Project Officers (POs), and examined the POs' contract files. We also interviewed laboratory TD monitors for the Mantech contract.

In addition, we reviewed the Acquisition Management Improvement Initiative (AMII) draft report dated June 22, 1992, and the new procedures for the Mantech contract TD preparation issued May 14, 1992. We also assessed the adequacy of actions planned and in process at AREAL to address the deficiencies noted by the AMII review and AREAL's Quality Action Team (QAT).

This effort constituted a survey of contracting activities at AREAL, and does not represent an audit in accordance with the Government Auditing Standards (1988 Revision). The potential deficiencies cited in this survey report are being called to management's attention for such action as it deems appropriate.

## SURVEY RESULTS

As a result of our survey we identified several areas of concern with regard to an AREAL contract award action and AREAL's administration of the Mantech contract. These concerns, along with the findings of ORD's AMII and our assessment of AREAL's completed and planned corrective actions, are provided below.

### A. CONTRACT AWARD

We found no instances of splitting of SBA Section 8(a) contracts to avoid competition. However, we did have concerns regarding the justification for sole-source award of one non-8(a) contract.

#### Envair Contract Award

We have concerns whether the sole-source award of an \$80,000 fixed-price contract to Envair in September 1991, met the Federal Acquisition Regulation (FAR) requirement for sole-source awards.<sup>1</sup> The FAR 6.302-1 (a) (2) (i) allows sole-source awards for unsolicited research proposals which are unique and innovative. Based on information made available to us, the uniqueness and innovativeness of the Envair proposal appeared questionable.

The sole-source justification for the award stated the uniqueness of the proposal was that: (1) it raises the possibility that the same ozone strategy in all U.S. non-attainment areas may not be justified; and (2) EPA should explore the option of multiple strategies [i.e., VOC (volatile organic compounds) control versus NOx (nitrogen oxides) control or some combination of both].

EPA has historically encouraged exclusive reliance on VOC emission reductions to achieve compliance with ozone air quality standards. In recent years EPA has accepted NOx emission reductions as a supplement to VOC control.

We found material contained in two reports which appeared to present the same idea which was included in the sole-source justification as the basis for the uniqueness and innovativeness of the proposal. These reports included a National Research Council report entitled Rethinking The Ozone Problem In Urban And Regional Air Pollution, released in 1991, and an Office of Technology Assessment staff paper entitled Urban Ozone And The Clean Air Act: Problems and Proposals for Change, issued in April

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<sup>1</sup>The sole-source justification also approved two additional phases estimated to cost a total of \$140,000.

1988. These reports discussed the role of NOx and VOC in forming ozone pollution and suggested that NOx controls should play a larger part in reducing ozone pollution. For example, the National Research Council report noted that "...NOx control will probably be necessary in addition to or instead of VOC control to alleviate the ozone problem in many cities and regions. The optimal set of controls of NOx, VOCs, or both will vary from one region to another, as discussed above."

We also noted circumstances which could indicate a potential conflict of interest in the award of this contract. We found that the owner of Envair was on a peer review panel which evaluated AREAL's Air Oxidant Program. He served on this panel prior to submitting his research proposal to AREAL. The Envair proposal was submitted to one of the project managers in the Air Oxidant Program. This same project manager later became the PO for the Envair contract.

In general, we are concerned about the appearance of a lack of competition for contracts at the laboratory. We plan to address issues related to the award of and competition for contracts in separate OIG audits in the near future.

#### B. CONTRACT ADMINISTRATION

We identified several areas of concern with AREAL's administration of the Mantech contract. Most significant of these areas were the indications of personal services relationships, the invoice review and approval process, and the preparation of TDs.

These contract administration issues were also identified in two recent internal reviews at AREAL. First, AREAL conducted a Quality Action Team (QAT) review of the preparation of Mantech contract TDs. This resulted in a May 14, 1992, memorandum from the AREAL Director to AREAL Division Directors, Branch Chiefs, and TD Monitors outlining changes in the preparation of TDs. Secondly, the Office of Research and Development (ORD), in conjunction with CMD, completed a review of contract management at AREAL and issued a draft report on June 22, 1992. This review was part of ORD's AMII. A discussion of the various survey issues mentioned in these reviews, along with our analysis of corrective actions taken by AREAL, is provided below.

## 1. PERSONAL SERVICES

### OIG Survey

As a result of our survey we noted that the Mantech contract exhibited most of the attributes of a personal services relationship. The contractor's work: (1) was performed on-site, (2) was accomplished with Government-furnished equipment, (3) was integral to the mission of AREAL, and (4) has lasted over one year. We did not evaluate whether similar services were performed by Government employees in EPA or other agencies.

We also noted descriptions of activities which indicate that Government supervision of the Mantech employees may be occurring. For example, a laboratory divisional award fee evaluation recommended several Mantech employees for individual awards based on job performance. Another award fee evaluation discussed the cooperative effort between EPA and Mantech in filling a "bioprobe" position. The evaluation did not state whether the position was a contractor or EPA position; however, the nature of the interaction described is inappropriate in either instance.

In addition, we noted that TDs were deficient in descriptions of work required and deliverables expected, and, as a result, appeared to have required excessive direction from the laboratory's technical monitors.

### AMII Review

The AMII draft report indicated that the potential for personal services was the highest area of vulnerability in the Mantech contract. The report cited the co-authorship of papers, the lack of definitive TDs resulting in the need for excessive EPA direction, EPA involvement in contractor staffing, and contractor support to laboratory committees as areas of concern.

The report recommended that: (1) ORD develop a policy on co-authorship, (2) AREAL issue guidance on the preparation of TDs and issuance of technical direction, (3) AREAL review and revise management performance standards to include contract management, (4) AREAL officials take the Procurement and Contracts Management Division (PCMD) Project Officer refresher course, (5) AREAL and CMD prepare guidance on the use of Key Personnel clauses and TD workplans, (6) ORD and AREAL develop guidance on the involvement of contractors in supporting laboratory committees, and (7) AREAL in conjunction with the Office of General Counsel (OGC), PCMD, and ORD determine the limitations on the use of Senior Environmental Employees.



## OIG Analysis of Corrective Actions

We agree with the recommendations cited in the AMII draft report. We also noted that the AREAL Director issued new procedures for the preparation of TDs in a May 22, 1992 memorandum. We believe these actions and new procedures, if implemented, will help in eliminating the appearance of personal services relationships in the Mantech contract.

## 2. INHERENTLY GOVERNMENTAL FUNCTIONS

### OIG Survey

We noted that Mantech Quarterly Progress Reports contained statements indicating that contractor employees performed a function which may be inherently governmental. In describing the task functions for Technical Directive No. 58, Mantech's quarterly reports indicated that the contractor... "established cooperative agreements with government, university, and private personnel." Although not listed as a prohibited activity under EPA order 1900.2, we believe this type of activity represents an inherently governmental function.

We were also informed by a technical monitor that the contractor assisted in the preparation of his draft TD. The monitor stated that this assistance was necessary since AREAL did not have expertise in the area of work required by the TD.

### AMII Review

The AMII draft report identified several areas of concern under the issue of inherently governmental functions. These areas included: (1) use of contractors to perform Quality Assurance (QA) and Quality Control (QC) functions, (2) contractor participation on peer review panels for evaluating potential EPA hires, (3) contractor development of contractual tasks, and (4) contractor evaluation of commercial products for the possibility of future use by EPA.

The report recommended that: (1) the Office of Modeling and Monitoring Systems Quality Assurance establish a QAT to review the use of contractors for conducting QA and QC activities, (2) AREAL conduct a review and make recommendations concerning the use of contractors in peer review panels established for evaluating potential EPA hires, and (3) AREAL prepare a position paper outlining controls to ensure compliance with Agency directives and the FAR when contractors evaluate commercial products for EPA.

### OIG Analysis of Corrective Actions

We agree with the recommendations cited in the AMII draft report. The report also states that AREAL intends to review contractor performance of sensitive and controlled activities.

#### Recommendation

We recommend that the review of contractor performance of sensitive and controlled activities include the contractor's role in participating in the establishment and monitoring of cooperative agreements.

### 3. INVOICE REVIEW AND APPROVAL

#### OIG Survey

Our survey work disclosed indications that the invoice review and approval process used for the Mantech contract was not sufficient to ensure that costs approved and paid for by EPA were reasonable or supportable. The Mantech invoices we reviewed did not provide detailed cost data for labor hours, travel, training, and equipment charged as direct costs to the contract. We also noted that the TD monitors did not routinely provide feedback to the PO on the reasonableness of costs charged to their technical directives. Given the lack of detail on the invoices and the lack of input from technical directive monitors, the PO did not have adequate assurance that the costs approved for payment were supportable or reasonable.

#### AMII Review

The AMII draft report recognized the need for better review of contractor costs and that it may be difficult for AREAL to demonstrate that billings are "reasonably accurate." The report recommended that AREAL and CMD define the technical monitor role and ensure that technical monitors are provided with necessary monthly financial data.

### OIG Analysis of Corrective Actions

We agree with the recommendations cited in the AMII draft report. We believe that defining the technical monitor's role is necessary.

#### Recommendation

We recommend that a system be developed for the technical monitor (or work assignment manager) to provide appropriate feedback to the PO before invoices are approved for payment.

#### 4. TECHNICAL DIRECTIVES

##### OIG Survey

All four technical directives we reviewed in our survey sample did not contain: (1) adequate descriptions of work to be performed, (2) adequate descriptions of deliverables or end-products, and (3) criteria for determining acceptance of deliverables. In addition, we saw indications that work started under TDs before the TDs had been approved by the PO. We also noted that the nature of the work performed under TDs changed without a concurrent modification of the TD. On one TD, the technical monitor informed us that the contractor helped in the preparation of the draft TD. We also noted that the Mantech contract TDs were issued by the PO but copies were not provided to the Contracting Officer (CO).

##### AMII Review and AREAL QAT

TD deficiencies were addressed through an AREAL QAT and by the AMII draft report. Both reviews noted that TDs were overly general and broad in scope, thus requiring excessive technical direction from technical monitors.

As a result of the AREAL QAT, the Director of AREAL issued a memorandum outlining changes in the preparation of TDs. The major change included re-writing and re-issuing all TDs by July 1, 1992. The guidance required new TDs to be "completion form" to the extent possible, which meant that new TDs were to: (1) describe work that is for a specified period of time, (2) have defined products/end points, (3) contain well-defined budgets and skill mix requirements, and (4) be detailed enough to minimize the need for additional technical direction.

The AMII draft report outlined corrective actions being undertaken by the AREAL QAT which included designing a standardized TD format and defining the role of the technical monitor. The AMII draft also recommended that: (1) all levels of management and supervision have their performance standards reviewed and revised if necessary to include emphasis on contract management, and (2) AREAL POs and technical monitors take the Project Officer refresher course.

### OIG Analysis of Corrective Actions

We agree with the recommendations of the AMII draft report and the new procedures issued by AREAL which, if implemented, should resolve the deficiencies in TD preparation. However, we question the appropriateness of POs issuing TDs. We believe the TDs are, in effect, work assignments. EPA Acquisition Regulation (EPAAR) 1512.104(b) requires that EPAAR Clause 1552.212-71 Work Assignments be inserted into a contract when work assignments are used in a cost-reimbursement term form (i.e., level-of-effort) contract. This clause requires that COs issue work assignments. We believe the use of CO-issued work assignments would have prevented many of the problems noted above in the preparation and issuance of TDs.

### Recommendation

We recommend that AREAL work with the Contracts Management Division to evaluate whether a work assignment system should be used instead of a technical directive system when issuing work tasks to contractors.

## 5. TRAVEL AND TRAINING

### OIG Survey

We found no written contract policy defining what types of contractor training and travel costs are allowable as direct charges to the contract. The lack of a written policy combined with the TD and invoice review and approval deficiencies noted above increase the possibility that unnecessary and unauthorized costs will be paid by AREAL.

### AMII Review

The AMII draft report recognized the lack of contract policy on travel and training and recommended development of contract clauses and guidance in this area.

### OIG Analysis of Corrective Actions

We agree with the actions recommended in the AMII draft report. These guidelines, if implemented and enforced, should resolve the deficiency noted.

## 6. FUNDING

### OIG Survey

As evidenced by a March 28, 1991, memorandum from the then Acting Director of CMD, RTP incremental (obligated) funding was allowed to fall approximately \$1 million short of incurred costs on the Mantech contract during early 1991. Funding also fell short of incurred costs for some TDs during September and October 1991. Although funding was eventually obtained to cover all obligations, laboratory managers should not allow contractors to incur costs if sufficient obligated funds are not available. In this case, the Government would find itself in a position in which it was liable for reimbursing contractors without the funding to do so.

### AMII Review and AREAL QAT

The AMII draft report discussed incremental funding as an ORD-wide problem. The report recommended that ORD meet with the Office of the Comptroller to present the case for improving the efficiency of funds control and for disseminating explanations on the procedures for recertification of funds and for releasing incremental funding. The draft report also discussed the need to train contract managers in preparing independent cost estimates for TDs.

The AREAL QAT also identified a need to restructure and reform the financial management processes of the Mantech contract. In a July 9, 1992 memorandum, the AREAL QAT Chairperson, established a new "financial" QAT to address these issues.

### OIG Analysis of Corrective Actions

Since the outcome of recommended meetings with the Office of the Comptroller and the results of the AREAL "financial" QAT are pending, we cannot comment on the effectiveness of these actions.

cc: Christian R. Holmes, Assistant Administrator for  
Administration and Resources Management, PM-208

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H. Matthew Bills, Acting Director, Office of Modeling,  
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