



Gilbert/Commonwealth engineers and consultants

GILBERT ASSOCIATES, INC., P. O. Box 1498, Reading, PA 19603/Tel. 215-775-2600/Cable Gilasoc/Telex 836-431

June 6, 1984

2980114
2700012/17

PD-EAP-494

150-35412

Agency for International Development
NE/PD/MENA, Room 4440, NS
Washington, D.C. 20523

Attention: Mr. Davey McCall

Re: Damascus Water Supply Project
Contract 69/1981
Evaluation Report of GEBA Invoices
1.S.118.04 and 1.S.118.05

Gentlemen:

Attached please find the evaluation report prepared by GAI according to your instructions in the transmittal received on May 11, 1984, from your Ms. Rosella L. Marshall.

The report is our evaluation of the subject invoices following joint meetings with G. E. Boggs and Associates, and Advance Control Systems.

If you have any questions on the evaluation report, please let me know. If necessary, a meeting can be arranged at your convenience to review the report.

Very truly yours,

R. T. Kase
Director of Special Projects

RTK:cah

Attached

Principal Offices

525 Lancaster Avenue, Reading, PA/Morgantown Road, Green Mills, Reading, PA 215 775-2600
209 East Washington Avenue, Jackson, MI 517 788-3000/One Exchange Place, Suite 1003, Jersey City, NJ 201 451-5220

CONTENTS

BACKGROUND

MEETING

EVALUATION OF CONTRACT STATUS

AMOUNT DUE CONTRACTOR

APPENDIX A

USAID TO GAI TRANSMITTAL

APPENDIX B

DESCRIPTION OF PRICE ITEMS

APPENDIX C

LETTER OF SUBSTITUTION

APPENDIX D

FIGURES

**EVALUATION OF PAYMENTS
DUE FOR CONTRACT B - DISPATCHING
SYSTEM AS OF 14 NOVEMBER 1983**

BACKGROUND

Gilbert Associates, Inc. (GAI) has been contracted by USAID Office of Near East Project Development to assist in the evaluation of two invoices that were submitted for work performed by G. E. Boggs and Associates (GEBA) and their subcontractor on the automatic dispatching system that is to be used for regulating the water supply for the city of Damascus, Syria.

The invoices have been submitted by GEBA along with sworn affidavits that the work for which payment is requested was completed prior to the November 14, 1983 legislation which terminated A.I.D.'s funding of Syrian host country contracts.

Appendix A is a copy of the transmittal from USAID to GAI which includes the purchase order; job description; and GEBA's letter of explanation, affidavits and invoices 118.04 and 118.05.

Following receipt and a review of Appendix A, GAI arranged joint meetings with GEBA, Advanced Control Systems, the subcontractor, and GAI during the week of May 21, 1984. The meetings were held at Advanced Control System's facilities in Atlanta, Georgia. The automatic control system is being integrated in Atlanta, Georgia.

GEBA and Advanced Control Systems shall be referred to as the Contractor in the remainder of the report, unless a specific point is to be made in reference to one of the organizations.

MEETINGS

The purpose of the Atlanta meeting was for GEBA to demonstrate and for GAI to review and confirm the status of equipment and software for which GEBA requested progress payments in its invoices numbers 118.04 and 118.05. The status of the equipment and software as of November 14, 1983 was to be determined by GAI and reported to USAID.

During the meeting at the Contractor's facilities, a combination of personnel interviews, visual inspection of hardware, demonstration of software and hardware, and review of documentation were utilized to gather data determining the level of contract completion reached as of November 14, 1983.

During the meetings, Advanced Control System's personnel from Project Management, Engineering, System Integration, Quality Assurance and Software were interviewed to acquaint GAI with their internal procedures in developing, integrating and controlling a project, and specifically the position of the Figh project.

EVALUATION OF CONTRACT STATUS

Appendix B is a description of each of the price items that have been invoiced. The descriptions include the status of the previous and present invoices, the requirements for reaching a Milestone, the comments/findings for the price item that impact the amount of payment, list of the deficiencies, and the GAI recommended amount of payment. The Milestone Requirements for Payments Requested are identified in the contract.

During the evaluation meetings, the Contractor's Production and Quality Assurance Departments provided inspection/test documents for the automatic control system that identified that the system had passed production testing on October 11, 1983 and was operational through November 16, 1983 when the quality control department completed their inspection/testing. GAI has accepted these documents

as proof of the completion level of the system on November 14, 1983. This position is justified since the system passed production testing on October 11, 1983 and was operational following that date until Advanced Control Systems were notified of the termination of funding.

To arrive at a percent complete for each of the price items, GAI set up guidelines for evaluating the value of common deficiencies which are described below. Separate explanations are provided for significant reductions in the amount recommended as compared to the amount claimed for individual price items:

- The Quality Assurance Inspection/Test Checksheets which the Contractor will submit as the hardware integration and software modules tests procedure are acceptable as having adequate content for the test. The percent complete has been reduced by 1 percent to allow for customizing the checksheets. For the most part, this same percentage was subtracted from the percent complete for each price item if total required documented was not approved for the Milestone level being claimed by the Contractor.

- The CRT display system, price item B.05, has a major deficiency in the lack of consoles and physical lockouts of the keyboards. GAI has deducted 12 percent for the lack of the consoles. The same percentage was deducted from a previous invoice due to the lack of the consoles. Five percent has been deducted due to the lack of the physical lockouts.

- The Contractor has identified price items B.01, .02, .03, .04, .05, .06, .10, .11a, .11c, .12 and portions of .13 as being prepared and passed Milestone tests. GAI has witnessed a mini-demonstration of their performance level and feel that the items would pass the appropriate tests. However, the full test requirement of the specification including witnessing by the

Client and the Engineer, has not been performed. Therefore, payments due have been reduced due to incomplete testing as called for in the specifications:

B.01, B.02, B.03, B.04, B.05, B.06, B.10 - Minus 3%

B.11a & c, B.12 - Minus 5%

B.13 (Partial) - Minus 1% (standard modules)

- The ACS SCADA system software has been reduced by 17 percent of the amount claimed by the Contractor. Ten percent of this reduction is due to the need for the Contractor to modify the alarm acknowledge procedure, enter the data base, complete logs and displays, identify alarms, etc. A five percent reduction was applied due to the lack of individual module descriptions as required for Milestone 3. The remaining two percent are for lack of test documentation and running of the tests.

- A three percent reduction was applied to the amount claimed for the RTU Interface and Communications Preprocessor Systems due to the lack of individual module descriptions as required for Milestone 3. Due to the size of the software systems, this reduction is less than the reduction for the same deficiency of the ACS SCADA System.

- The Automatic Water System Program amount claimed has been reduced by 20 percent. GAI evaluation of the program is that the amount of work yet to be expended is significant as related to the effort which has been expended. The contractor has designed that program to include four of his standard modules which, by his admission, require minimum modification. The remaining module, the algorithm will require extensive customized program development to reach completion.

AMOUNT DUE CONTRACTOR

Based on GAI's findings at the meeting in Atlanta and applying the approach to the evaluation of work complete as described previously and in Appendix B, GAI recommends that payment to GEBA should be based on a value of completed work up to November 14, 1983.

Appendix D includes two figures which summarize the details of the payments requested and payments recommended. Figure 1 illustrates the applicable Milestones for each price item, the levels of invoicing and the GAI recommended level of completion for each price item.

Figure 2 is a tabulation of the price for each item, the payment previously approved for each price item, the amount claimed for each price item by GEBA and the amount approved by GAI.

Adjustments to be made before setting the amount of payment include:

- o Negative 5% for the reduction of the tender amount as offered by GEBA if awarded Contracts B and C.
- o Positive 2.9% for price adjustment for escalation on equipment that occurred from the time of the tender submittal to the effective date of the Contract in accordance with detailed instructions set out in the Contract.

Based on these adjustments, the amount payable to GEBA should be:

Price of Work Completed thru November 14, 1983	\$2,180,715
Tender Reduction - 5%	<u>109,036</u>
Net Price to Date	2,071,679
Price Adjustment - 2.9%	<u>60,079</u>
Adjusted Net Price of Work Completed thru November 14, 1983	\$2,011,600

Payments to GEBA to date thru I. S. No. 118.03 total \$759,628 after total retention amounts of \$39,980.

The payment to be made to GEBA for work performed thru November 14, 1983 must consider:

1. The adjusted net price of work completed thru November 14, 1983
2. Payments made to date
3. Retention made to date and USAID's position on release of past retention or application of retention to current payment

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

MAY 11 1984

Mr. Raymond Kase
Gilbert Associates
P.O. Box 1498
Reading, PA

Dear Mr. Kase:

Please find the following enclosed:

1. Purchase Order requesting you to review the Hadron invoices;
2. Copy of Hadron's Contract B;
3. Copy of invoices #118.04 and #118.05.

If you have any questions please contact Liz Cordaro or myself at 703-235-9125.

Sincerely,

Rosella Marshall

Rosella L. Marshall
Assistant Contract
Services Officer

8

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 5/11/84	2. CONTRACT NO. (If any) NEB-0194-0-00-4045-00	3. ORDER NO. 000-1001	4. REQUISITION/REFERENCE NO. 298-0194-10-000-1001
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5. ISSUING OFFICE (Address correspondence to) Agency for International Development ATTN: M/SER/CM/SD/FSR, Elizabeth Cordaro Room 703, SA-14 Washington, D.C. 20523	6. SHIP TO: (Consignee and address, ZIP Code) Mr. Davy McCall Agency for International Development NE/PD/MENA, Room 4440, NS Washington, D.C. 20523 SHIP VIA:
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7. TO: CONTRACTOR (Name, address and ZIP Code) Gilbert Associates, Inc. P.O. Box 1498 Reading, PA 19603	8. TYPE OF ORDER <input checked="" type="checkbox"/> A. PURCHASE - Reference your <u>N/A</u> Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheets, if any, including delivery as indicated. This purchase is negotiated under authority of <u>Executive Order 11223</u> <input type="checkbox"/> B. DELIVERY - Except for billing instructions on the reverse, this delivery order is subject to the instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.
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9. ACCOUNTING AND APPROPRIATION DATA Appropriation: <u>72-11M1006</u> Allotment: <u>856-62-298-00-66-43</u> <u>NSAA-78-33298-KG-81</u>	10. REQUISITIONING OFFICE <u>AID/NE/PD/MENA</u>
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11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> SMALL <input checked="" type="checkbox"/> OTHER THAN SMALL <input type="checkbox"/> DIS-ADVANTAGED <input type="checkbox"/> WOMEN-OWNED	12. F.O.B. POINT <u>USA</u>	14. GOVERNMENT B/L NO. <u>N/A</u>	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) <u>N/A</u>	16. DISCOUNT TERMS <u>N/A</u>
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17. SCHEDULE (See reverse for Rejections)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
A.	<u>Background</u> G.E. Boggs and Associates, now known as Hadron, Inc., entered into two contracts with the Etablissement Public des Eaux de Fiegh ("EPEF"). This Scope of Work is concerned only with one of these contracts, Contract "B". The purpose of this Contract "B" was to build an automatic dispatching system for regulating the water supply of the city of Damascus, Syria. The work on this dispatching system was performed in Atlanta, Georgia. This Contract "B" was financed by A.I.D. until the passage of the November 14, 1983 legislation which terminated A.I.D.'s funding of this contract and other Syrian host country contracts.				FIRM FIXED PRICE \$9,700	

FUNDS AVAILABLE
MAY 11 1984
L. Ridgen
Program Acctg. Division
OFFICE OF FINANCIAL MANAGEMENT

18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	17(H), TOT. (Cont. pages)
21. MAIL INVOICE TO: (Include ZIP Code) Mr. Sandy Owens, AID/PM/PAD Washington, D.C. 20523			17(I), GRAND TOTAL \$9,700

22. UNITED STATES OF AMERICA BY (Signature) <i>Elizabeth Cordaro</i>	23. NAME (Typed) Acting Chief, Field Support & Rev. Bra TITLE: CONTRACTING/ORDERING OFFICER
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**ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION**

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 5/11/84	CONTRACT NO. NEB-0194-0-00-4045-00	ORDER NO. 000-1001
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ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
B.	<p>Using the authority of that legislation, A.I.D. later adopted Hadron's contract and then terminated it for the convenience of the Government. Hadron then submitted two invoices to A.I.D. for payment. Hadron asserts that these two invoices are for work performed prior to the November 14 cutoff of A.I.D. funds. These invoices have not been approved by "EPEF". Prior to the November 14 legislation, Gilbert Associates under the Damascus Water Supply II contract with "EPEF", had been supervising the performance of Boggs (Hadron) and then certifying the Boggs invoices for payment.</p> <p><u>Scope of Work</u></p> <p>A.I.D.'s Office of Near East Project Development requires the engineering assistance of Gilbert Associates in reviewing these two Hadron invoices and determining what work was actually performed by Hadron prior to the November 14 cutoff of A.I.D. funding of Contract "B".</p> <ol style="list-style-type: none"> 1. The Contractor shall thoroughly review the two invoices submitted by Hadron, Inc. for work performed before November 14, 1983, under Contract "B". Copies of these invoices have been provided to the Contractor. These invoices consist of: <ol style="list-style-type: none"> a. Interim Statement No. 118.04 dated November 10, 1983 for the amount of \$1,086,469; b. Interim Statement No. 118.05 dated December 30, 1983 for the amount of \$435,584. 2. With regard to Interim Statement 118.05, Contractor shall also review 					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

**ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION**

PAGE NO.

3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER

5/11/84

CONTRACT NO.

NEB-0194-0-00-4045-00

ORDER NO.

000-1001

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	<p>Hadron's April 6, 1984 letter and its attached documentation to A.I.D. which asserted that even though the invoice was dated December 30, 1983, all the work was performed before the November 14 cutoff of funding by A.I.D. (A copy of this letter has been provided to the contractor.) In the Contractor's report to A.I.D. he shall determine whether all the work billed in Interim Statement 118.05 was in fact performed by November 14, 1983. If Contractor determines that some of the work was performed after November 14, 1983, he shall describe what part occurred after the November 14 cutoff.</p> <p>3. The Contractor shall visit the location of the dispatching system in Atlanta, Georgia. Hadron has agreed to make its facilities available to the contractor for such a visit. The Contractor shall use this site visit to assist him in the review of these invoices. While there, the contractor shall take whatever steps necessary to complete his review. If Contractor has questions about the extent of his review at site, he shall call the Contracting Officer.</p> <p>4. Upon the completion of the review of the invoices and the site visit, the Contractor shall then prepare a written report. This report shall adequately cover the following areas of concern in addition to that discussed in paragraph 2 above:</p> <p>a. Whether the services described in the two invoices and in the supporting documentation attached thereto are those called for in Hadron's Contract "B";</p>					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

12

**ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION**

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 5/11/84	CONTRACT NO. NEB-0194-0-00-4045-00	ORDER NO. 000-1001
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ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	<p>b. Whether the nature, quality and quantity of these services are accurately described in the documentation;</p> <p>c. Whether the services were reasonably necessary to be performed under Hadron's Contract "B";</p> <p>d. What, if any, milestones were reached by Hadron;</p> <p>e. Whether the goods and services described were of the kind for which "EPEF" would have been obliged to pay for had Contract "B" been carried out to fruition.</p> <p>The Contractor shall submit, by June 8, 1984, the original and four copies of this report to:</p> <p>Davy McCall, Agency for Intl. Development NE/PD/MENA, Room 4440, NS Washington, D.C. 20523</p> <p>5. Upon the completion of his report, the Contractor shall be available for a briefing and discussion of his findings with NE/PD. The Contracting Officer shall contact the Contractor and arrange an acceptable date for such a meeting.</p> <p>6. The Contractor agrees, that if its contract with "EPEF" is reinstated, or if a new contract with "EPEF" is issued, Contractor will not bill for the services rendered under this purchase order.</p>					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

April 6, 1984

Ms. Rosella Marshall
U.S. Agency for International
Development
1735 N. Lynn Street - Room 703
Plaza West
Rosslyn, Virginia

Re: Damascus Water Supply Project
Contracts 69/1981 (B) and 70/1981
(C): G.E. Boggs and Associates,
Inc. /Etablissement Public
des Eaux de Figeh

Dear Ms. Marshall:

We are writing with respect to Invoice No. 118.05, covering work done pursuant to G.E. Boggs & Associates, Inc. (GEBA) contracts with the Etablissement Public des Eaux de Figeh to build control and communications systems for the Damascus water supply. In connection with termination by the United States Government of all foreign aid to Syria, the U.S. Agency for International Development (AID) adopted these contracts on March 9, 1984, and is in the process of terminating them. AID has agreed to expedite payment of invoices submitted for work performed prior to November 14, 1983, the date the United States Government terminated aid to Syria. Hadron, Inc., GEBA's parent corporation, presented Invoice Nos. 118.04 and 118.05 to AID for expedited payment. Invoice No. 118.04, dated November 10, 1983, is in the process of being approved for expedited payment, but AID has said it cannot move forward on Invoice No. 118.05 because it is dated December 30, 1983, and apparently covers work done after the November 14 cutoff date.

Although Invoice No. 118.05 bears a December date, the work it covers was performed prior to November 14. You suggested that we submit an amended invoice showing what parts of the work were done before November 14, or that we submit some form of explanation as to why the invoice is dated in December if all the work was done prior to November 14. If this is done, you said that Invoice No. 118.05 can be expedited along with Invoice No. 118.04. We are hereby submitting an explanation as to why the invoice is dated in December when the work was actually done prior to November 14, 1983; sworn affidavits executed by Hadron officials to the effect that the work was performed before November 14, 1983; and copies of

4

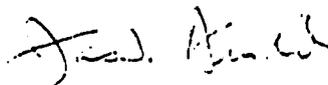
Ms. Rosella Marshall
April 6, 1984
page two

Telexes and follow-up letters sent to our prime subcontractors in mid-November after receipt of the AID notice requesting them to halt work immediately in light of the government's cutoff of aid to Syria.

As you are aware, the Figh contracts call for work to be invoiced at certain progress milestones or partially completed milestones. Work is invoiced in phases; every individual piece of a project is not invoiced the moment it is done. Substantial amounts of work completed pursuant to the Figh contracts may not be ripe for invoicing for weeks or months. You will note that only six invoices, including those that are the subject matter of this letter, have been submitted even though the work went forward through 1982 and most of 1983. Invoice No. 118.04, prepared and submitted before the cutoff of aid to Syria, covered work done through November 10, 1983. Invoice No. 118.05, prepared at the end of the year, covers all work completed but not yet invoiced at the time of cutoff. However, aid to Syria had ended, work pursuant to the contracts had been effectively suspended because Syria showed no inclination to fund the contracts from its own resources, and from Hadron's point of view it seemed wisest to simply seek payment for work it had done. The payment milestones had become relatively meaningless by the end of the year, since work pursuant to the contract had effectively come to a halt.

Again, we stress that Hadron requested its subcontractors, whose work is the subject of Invoice No. 118.05, to terminate their work as soon as AID ordered Hadron to terminate work. We urge AID to verify this fact with the subcontractors during the upcoming inspection being performed in connection with Invoice No. 118.04. The only items of work performed after the cutoff were tasks needed to avoid spoiling work that had been done before. As we understand from AID's Notice of Termination, paragraph 2, any work done under these conditions forms part of the overall termination claim. None of those tasks are the subject of Invoice No. 118.05. We remind AID that the invoice date does not reflect the cutoff date for work and stress that the work for which payment is being sought was completed prior to November 14, 1983, and urge AID to make this invoice part of the upcoming inspection and to process it for expedited payment. If you have any questions, please do not hesitate to call.

Sincerely,



James L. Arnold
Vice President
and General Counsel

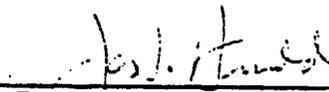
JLA:mjf

cc: Joseph Price, Esquire
Laura M. Richards

15

AFFIDAVIT

I hereby swear that to the best of my knowledge and belief the work for which payment is sought pursuant to Invoice No. 118.05 was completed before November 14, 1983.

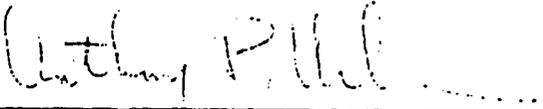


James L. Arnold

April 5, 1984

AFFIDAVIT

I hereby swear that to the best of my knowledge and belief the work for which payment is sought pursuant to Invoice No. 118.05 was completed before November 14, 1983.



Anthony Urban

April 5, 1984

WJ INFOMASTER

•
TELCOM VINA

0016181325 0846EST

ZCZC 01 VIENNA, VIRGINIA 21 NOV 83
TWX 8107570210 ADVCTL DORA

TO: JOHN MJENCH
ADVANCED CONTROL SYSTEMS

TELEFX NO 170-83

18 NOV 83

1. WE HAVE BEEN ADVISED BY USAID THAT LEGISLATION WAS ENACTED BY THE U.S. CONGRESS 14 NOVEMBER 1983 TO TERMINATE THE AID PROGRAM WITH THE GOVERNMENT OF SYRIA. THEREFORE, AS OF THAT DATE, AID MAY NO LONGER FINANCE OUR CONTRACTS WITH EPEF FOR THE DAMASCUS WATER SUPPLY PROJECT. THE LEGISLATION ALSO AUTHORIZES AID TO ADOPT AS A CONTRACT OF THE U.S. GOVERNMENT, AND ASSUME ANY LIABILITIES ARISING THEREUNDER ANY CONTRACT WITH A U.S. CONTRACTOR WHICH HAD BEEN FUNDED BY AID PRIOR TO 14 NOVEMBER.
2. AS A RESULT OF THE CONGRESSIONAL ACTIONS AND THE NOTIFICATION FROM AID, WE REGRET TO ADVISE YOU THAT UNDER THE TERMS OF PURCHASE AGREEMENT 118.01 ARTICLE 27, WE HEREBY SUSPEND THE ENTIRE WORK UNTIL WE CAN DETERMINE THAT EPEF WISHES TO EITHER TERMINATE OUR CONTRACTS OR CONTINUE.
3. THE FACTORY ACCEPTANCE TESTS FOR THE RTU'S SCHEDULED FOR 23 NOVEMBER 1983 ARE ACCORDINGLY CANCELLED.
4. WRITTEN CONFIRMATION OF THIS NOTIFICATION OF SUSPENSION OF WORK WILL FOLLOW.

BEST REGARDS,

A.P. URBAN
G. E. BOGGS AND ASSOCIATES, INC.

892321 TELCOM VINA
NNNN

ACCEPTED
(MSG NR NOT IDENTIFIED)

1-20

10

G. E. BOGGS & ASSOCIATES, INC.
TELECOMMUNICATIONS AND CONTROL SYSTEMS

21 November 1983

Granger Associates
3101 Scott Boulevard
Santa Clara, California 95051

ATTN: Mr. John L. O'Neill
Systems Product Manager

REF: Purchase Agreement 119.01
Suspension of Work

Dear Mr. O'Neill:

Confirming our telex message no. 171-83 dated 21 November 1983:

1. We have been advised by USAID that legislation was enacted by the U.S. Congress 14 November 1983 to terminate the AID program with the Government of Syria. Therefore, as of that date, AID may no longer finance our contracts with EPEF for the Damascus Water Supply Project. The legislation also authorized AID to adopt as a contract of the U.S. Government, and assume any liabilities arising thereunder, any contract with a U.S. contractor which had been funded by AID prior to 14 November.
2. As a result of the Congressional actions and the notification from AID, we regret to advise you that under the terms of Purchase Agreement 119.01 Article 24, we hereby suspend the entire work until we can determine that EPEF wishes to either terminate our contracts or continue.

Our customer has been notified of our suspension of work. As soon as we can determine his intent, we can discuss the actions that should be taken.

If there are any questions, please call.

Very truly yours,



A. P. Urban
Vice President

APU:ec

G. E. BOGGS & ASSOCIATES, INC.
TELECOMMUNICATIONS AND CONTROL SYSTEMS

21 November 1983

Advanced Control Systems
P. O. Box 47824
Atlanta, Georgia 30362

ATTN: Mr. John M. Muench
President

REF: Purchase Agreement 118.01
Suspension of Work

Dear Mr. Muench:

Confirming our telex message no. 170-83 dated 18 November 1983:

1. We have been advised by USAID that legislation was enacted by the U.S. Congress 14 November 1983 to terminate the AID program with the Government of Syria. Therefore, as of that date, AID may no longer finance our contracts with EPEF for the Damascus Water Supply Project. The legislation also authorized AID to adopt as a contract of the U.S. Government, and assume any liabilities arising thereunder any contract with a U.S. contractor which had been funded by AID prior to 14 November.
2. As a result of the Congressional actions and the notification from AID, we regret to advise you that under the terms of Purchase Agreement 118.01 Article 27, we hereby suspend the entire work until we can determine that EPEF wishes to either terminate our contracts or continue.
3. The factory acceptance tests for the RTU's scheduled for 23 November 1983 are accordingly cancelled.

Our customer has been notified of our suspension of work. As soon as we can determine his intent, we can discuss actions that should be taken.

If there are any questions, please call (703) 893-7700 Ext 252.

Very truly yours,



A. P. Urban
Vice President

APU:ec

GRANGER SNTA

TO: JOHN O'NEILL
GRANGER ASSOCIATES

TELETYPE NO 171-83
21 NOV 83

1. WE HAVE BEEN ADVISED BY USAID THAT LEGISLATION WAS ENACTED BY THE U.S. CONGRESS 14 NOVEMBER 1983 TO TERMINATE THE AID PROGRAM WITH THE GOVERNMENT OF SYRIA. THEREFORE, AS OF THAT DATE, AID MAY NO LONGER FINANCE OUR CONTRACTS WITH EPEF FOR THE DAMASCUS WATER SUPPLY PROJECT. THE LEGISLATION ALSO AUTHORIZES AID TO ADOPT AS A CONTRACT OF THE U.S. GOVERNMENT, AND ASSUME ANY LIABILITIES ARISING THEREUNDER ANY CONTRACT WITH A U.S. CONTRACTOR WHICH HAD BEEN FUNDED BY AID PRIOR TO 14 NOVEMBER.
2. AS A RESULT OF THE CONGRESSIONAL ACTIONS AND THE NOTIFICATION FROM AID, WE REGRET TO ADVISE YOU THAT UNDER THE TERMS OF PURCHASE AGREEMENT 119.01 ARTICLE 24, WE HEREBY SUSPEND THE ENTIRE WORK UNTIL WE CAN DETERMINE THAT EPEF WISHES TO EITHER TERMINATE OUR CONTRACTS OR CONTINUE.
3. WRITTEN CONFIRMATION OF THIS NOTIFICATION OF SUSPENSION OF WORK WILL FOLLOW.

A.P. URBAN
VICE PRESIDENT
G.E. BOGGS AND ASSOCIATES, INC.

♦
GRANGER SNTA

TELECOM VINA

T*****
.....TV

G. E. BOGGS & ASSOCIATES, INC.
TELECOMMUNICATIONS AND CONTROL SYSTEMS

30 December 1983

TO: ETABLISSEMENT PUBLIC DES EAUX DE FIGEH
 RUE EL NASSR
 DAMASCUS, SYRIAN ARAB REPUBLIC

Ref: Damascus Water Supply Project
 Contract (B) 69/1981 Dated 31 December 1981

Funding: USAID Loan No. 276-K-010
 USAID L/COMM No. 276-K-01004

Payments to be made in accordance with EPEF Contract (B) 69/1981 Articles 4, 6 and 10. Conditions of Contract Section II "General Conditions" Articles 2.54 through 2.68; Section XIV "Dispatching System" Article 14.9 as amended by Addendum No. 5 dated 12 October 1981.

Payment, covering items in accordance with
Interim Statement No. 118.05 dated
30 December 1983.

US\$435,584

CERTIFIED CORRECT:

G. E. BOGGS & ASSOCIATES, INC.



Vice President

ETABLISSEMENT PUBLIC DES EAUX DE FIGEH

Rue Al Nassr
Damascus, Syria

PAGE 1 OF 4

الجمهورية العربية السورية
المؤسسة العامة لمياه عين الفيجة
دمشق

INTERIM STATEMENT No. 118.05 الكنف المؤقت رقم
PERIOD ENDING 30 December 1983 لنهاية تاريخ
CURRENCY U.S. Dollars العملة

Project	المشروع	<u>Dispatching System</u>
Contractor	المقصد	<u>G. E. BOGGS + ASSOCIATES, INC.</u>
Contract No. & Date	رقم العقد وتاريخه	<u>(B) 69/1981, 31 December 1981</u>
Basic Contract Amount	مبلغ العقد الاساسي	<u>US \$4,744,023</u>
Tender Reduction	تخفيض المناقمة	<u>US \$ (237,202)</u>
Price Adjustment	تعديل السعر	<u>US \$ 141,838</u>
Adjusted Net Contract Amount	مبلغ العقد الصافي المعدل	<u>US \$4,648,659</u>
Commencement Date	تاريخ الابتداء	<u>1 September 1982</u>
Completion Date	تاريخ الانتهاء	<u>30 May 1985</u>

Adjusted Net Price of Work to Date السعر الصافي المعدل للإشغال حتى تاريخه
Adjusted Net Price of Works in Previous Statements السعر الصافي المعدل للإشغال في القترات السابقة
Adjusted Net Price This Statement السعر الصافي المعدل لهذا القتر

US\$ 2,401,769	
US\$ 1,943,259	
US\$ 458,510	US\$ 458,510
US\$ 22,926	
-0-	
-0-	
US\$ 22,926	US\$ 22,926
	US\$ 435,584

Deduction - Retention احتريكات
Other - احتريكات اخرى
Total Deductions مجموع الاحتريكات
AMOUNT OF THIS STATEMENT مبلغ هذا القتر

Contractor's Certificate :

- I Certify that this invoice is true and correct and that all items for which payment is requested have been performed in compliance with the provisions of the contract.
- I agree to be paid the amount recommended by the Engineer and shall make the adjustments made by the Engineer to this statement on my next statement.

A. P. Urban
Vice President
Title

30 December 1983
Date

APPROVAL & CERTIFICATE OF ENGINEER :

I Certify (1) that the items for which payment is requested have been satisfactorily delivered, tested, shipped or installed as appropriate to the project milestone for which payment is requested and that all services for which payment is requested have been satisfactorily performed (2) the payment requested is in accordance with the terms of the contract.

The amount the Engineer recommends to be paid to the contractor for this interim statement is _____

GILBERT ASSOCIATES, INC.

Project Manager

Date

Etablissement Public des Eaux de Figeh
المؤسسة العامة لمياه عين الفيجة

Project Engineer
مهندس المشروع

Project Director
مدير المشروع

Director, Major Projects
مدير مكتب المشاريع الرئيسية

Director, Finance
مدير الشؤون المالية

تمت الموافقة على الدفع
Approved for

Payment

President Director General, EPEF
مدير عام المؤسسة العامة لمياه عين الفيجة

Date _____ التاريخ

EPEF - DAMASCUS

PROJECT Dispatching System

PAGE 3 OF 4

INTERIM STATEMENT N° 118.05

PERIOD ENDING 30 December 1983

**BASIS FOR PAYMENT REQUEST
CONTRACT EQUIPMENT, ETC.**

Price No.	DESCRIPTION	UNIT	QUANTITY	CONTRACT UNIT PRICE		CONTRACT EXTENDED PRICE		PERCENTAGE COMPLETION	AMOUNT CLAIMED	
				U.S.S	L.S.	U.S.S	L.S.		U.S.S	L.S.
B.01	Central Processing Units consisting of: HP2111F Central Processing Unit I/O Hardware Cabinet and Cabling	Each Each Each	2 4 2	203,080 13,857 8,123		<u>477,834</u> 406,160 55,428 16,246		75 75 75	304,620 41,571 12,185	
B.02	Main Memory	Lump Sum	1	Included in Price of B.01						
B.03	Bulk Memory consisting of: Disc Drive	Each	2	109,509		219,018		75	164,263	
B.04	Peripherals consisting of: Magnetic Tape Subsystem Printer System Console	Each Each Each	1 1 2	63,000 5,260 31,500		<u>131,261</u> 63,000 5,260 63,000		75 75 75	47,250 3,945 47,250	
B.05	CRT Display System	Lump Sum	1	372,558		372,558		75	279,419	
B.06	Loggers	Lump Sum	2	16,970		33,940		75	25,455	
B.07	Hard Copy Device	Lump Sum	1	Accommodated in Item B.06						
B.10	Master Station	Lump Sum	1	124,393		124,393		75	93,295	
B.11a	Remote Terminal Equipment, Large	Each	9	29,846		268,614		90	241,753	
B.11c	Remote Terminal Equipment, Small	Each	28	15,017		420,476		90	378,428	
B.12	RTU Test Equipment	Set	2	11,214		22,428		90	20,185	
B.13	Software Operating System: RTE6 ACS SCADA System RTU Interface System	Lump Sum Lump Sum Lump Sum	1 1 1	20,000 102,000 102,000		<u>658,061</u> 20,000 102,000 102,000		70 70 70	14,000 71,400 71,400	
PRICE OF WORK TO DATE - TOTALS								TOTAL		
SUBTOTAL						2,294,522		(To Page 2)	1,816,419	

EPEF - DAMASCUS

PROJECT Dispatching System

INTERIM STATEMENT N° 118.05

PERIOD ENDING 30 December 1983

**BASIS FOR PAYMENT REQUEST
CONTRACT EQUIPMENT. ETC.**

Price No.	DESCRIPTION	UNIT	QUANTITY	CONTRACT UNIT PRICE		CONTRACT EXTENDED PRICE		PERCENTAGE COMPLETION	AMOUNT CLAIMED	
				U. S. \$	L. S.	U. S. \$	L. S.		U. S. \$	L. S.
B.13	cont'd)									
	Communications Preprocessor System	Lump Sum	1	102,000		102,000		70	71,400	
	Automatic Water System Programs	Lump Sum	1	332,061		332,061		50	166,030	
B.14	Documentation	Lump Sum	1	80,110		80,110		75	60,083	
B.20	Engineering Services	Lump Sum	1	403,523		403,523		85	342,995	
PRICE OF WORK TO DATE - TOTALS								TOTAL		
						3,212,216		(To Page 2)	2,456,927	

Attachment A

Contract B Revisable Item Price Adjustment

- a. In accordance with Article 6, this adjustment applies to the U.S. Dollar components of the prices of the Work, except for training and operational assistance, as set forth in the Schedule of Prices and Estimate up to the effective date of the Contract.

The prices of Revisable Items will be adjusted from the Index for Electronic Components and Accessories published in the Bureau of Labor Statistics, Pricing Index No. 1178.

Index available as of one calendar month before the closing date (22 November 1981) for submission of proposal was the September 1981 Index = 170.8

Index available on the effective date of the Contract was the July 1982 Index = 175.8

$$\frac{ECa}{ECo} = \frac{175.8}{170.8} = 2.9\% \text{ adjustment increase}$$

Contract B Total		US\$ 4,506,821
Less:		
Training	US\$ 192,090	
Operational Assistance	<u>126,217</u>	
Deduct		<u>318,307</u>
Total to be adjusted (Po)		US\$ 4,188,514
Application of adjustment of 2.9%		<u>121,467</u>
Adjusted Total (Pa)		US\$ 4,309,981

- b. In accordance with Article 6, this adjustment applies to the U.S. Dollar components for training and operational assistance as set forth in the Schedule of Prices and Estimate up to the time of preparing a statement. This initial adjustment is up to the effective date of the Contract.

The prices of revisable items will be adjusted from the Hourly Earnings Index for Production or Non-Supervisory Workers on Private Non-Agricultural Payrolls by Industry Division, Services Published in Table 18 in the Monthly Labor Review of the U.S. Bureau of Labor Statistics.

Index available as of one calendar month before the closing date (22 November 1981) for submission of the proposal was the September 1981 Index = 139.8

Index available on the effective date of the contract was the July 1982 Index = 148.8

$$\frac{La}{Lo} = \frac{148.8}{139.8} = 6.4\% \text{ adjustment increase}$$

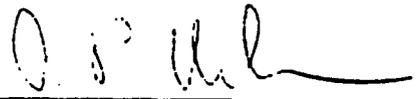
Contract B Training and Operational Assistance (Po)	US\$ 318,307
Application of adjustment of 6.4%	<u>20,371</u>
Adjusted Total (Pa)	US\$ 338,678

WARRANTY AND GUARANTEE

I, Anthony P. Urban, Vice President of G. E. Boggs & Associates, Inc. (GABA), with offices and place of business at 6862 Elm Street, McLean, Virginia 22101, USA, in accordance with Article 2.57.3 of the General Conditions of Contract No. 69/1981 dated 31 December 1981 entered into between Etablissement Public Des Eaux De Figehe (EPEF) of Damascus, Syria, and GEBA, warrant and guarantee that all work, materials, supplies and/or equipment irrespective of their present locations included in the Interim Statement No. 118.05 dated 30 December 1983 of said Contract No. 69/1981 are free of all liens, claims, security interests, and debts, and I undertake that ownership shall pass to EPEF free of all such encumbrances upon payment of the Interim Statement under reference as provided in the Contract. However, GEBA shall remain responsible for insurance and protection of the items not yet provisionally accepted by EPEF included in this Interim Statement. I further agree that the performance securities stipulated in Article 11 of the Contract also cover this undertaking.

G. E. BOGGS & ASSOCIATES, INC.

Date: 25 Jan 84

By: 

A. P. Urban
Vice President

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

VOUCHER NO.
118.05

U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT AND LOCATION

Controller, USAID/Syria
Damascus, Syria
Department of State
Washington, DC 20520

DATE VOUCHER PREPARED
30 December 1983

CHECK NUMBER AND DATE, L/COMM
276-K-01004, 13 July 1982
CHECK NUMBER AND DATE, Loan No.
276-K-010, 23 June 1976

SCHEDULE NO.

PAID BY

PAYEE'S NAME AND ADDRESS

G. E. Boggs & Associates, Inc.
6862 Elm Street
McLean, Virginia 22101, USA
Payment through Federal Reserve Bank of Baltimore;
Maryland Bank International No. 0560-0470-4
G. E. Boggs & Associates, Inc., Acct.
No. 957-112-6

DATE INVOICE RECEIVED

DISCOUNT TERMS

PAYEE'S ACCOUNT NUMBER

SHIPPED FROM

TO

WEIGHT

GOVERNMENT B/L NUMBER

NUMBER AND DATE OF ORDER	DATE OF DELIVERY OR SERVICE	ARTICLES OR SERVICES <i>(Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)</i>	QUANTITY	UNIT PRICE		AMOUNT (¹)
				COST	PER	
Payments to be made in accordance with EPEF Contract (B) 69/1981 Dated 31 December 1981 Articles 4, 6 and 10. Conditions of Contract Section II "General Conditions" Articles 2.54 through 2.68; Section XIV "Dispatching System" Article 14.9 as amended by Addendum No. 5 dated 12 October 1981.						
Contractor Invoice	118.05	For hardware integration up to 75 percent of the contract price; for software modules tested and accepted up to 70 percent of the contract price, for factory acceptance testing up to 90 percent of the contract price. Payment Request Less 5% Withholding				US\$458,510 22,926 US\$435,584

(Use continuation sheet(s) if necessary)

(Payee must NOT use the space below)

PAYMENT: <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL <input type="checkbox"/> PROGRESS <input type="checkbox"/> ADVANCE	APPROVED FOR	EXCHANGE RATE	TOTAL	DIFFERENCES
	BY:	= \$	= \$1.00	
	TITLE			
			Amount verified; correct for	(Signature or initials)

Pursuant to authority vested in me, I certify that this voucher is correct and proper for payment.

(Date)

(Authorized Certifying Officer)

(Title)

ACCOUNTING CLASSIFICATION

PAID BY	CHECK NUMBER	ON TREASURER OF THE UNITED STATES	CHECK NUMBER	ON (Name of bank)
	CASH	DATE	PAYEE'S	

¹ When stated in foreign currency, insert name of currency.
² If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign in the space provided, over his official title.
³ When a voucher is receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary", or "Treasurer", as the case may be.

PER
TITLE

ÉTABLISSEMENT PUBLIC DES EAUX DE FIGEH

Rue Al Nassr
Damascus, Syria

PAGE 1 OF 4

الجمهورية العربية السورية
المؤسسة العامة لمياه عين القبية
دمشق

INTERIM STATEMENT No. 118.04 الكنف المؤقت رقم
PERIOD ENDING 10 November 1983 لنهاية تاريخ
CURRENCY U. S. Dollars العملة

Project	المشروع	Dispatching System
Contractor	المتعهد	G. E. BOGGS + ASSOCIATES, INC.
Contract No. & Date	رقم العقد وتاريخه	(B) 69/1981, 31 December 1981
Basic Contract Amount	مبلغ العقد الاساسي	US \$4,744,023
Tender Reduction	تخفيض المنافسة	US \$ (237,202)
Price Adjustment	تعديل السعر	US \$ 141,838
Adjusted Net Contract Amount	مبلغ العقد الصافي المعدل	US \$4,648,659
Commencement Date	تاريخ الابتداء	1 September 1982
Completion Date	تاريخ الانتهاء	30 May 1985

Adjusted Net Price of Work to Date السعر الصافي المعدل للاشغال حتى تاريخه

US\$ 1,943,259

Adjusted Net Price of Works in Previous Statements السعر الصافي المعدل للاشغال في الكشوف السابقة

US\$ 799,608

Adjusted Net Price This Statement السعر الصافي المعدل لهذا الكنف

US\$ 1,143,651

US\$ 1,143,651

Deduction - Retention

الحصصيات - التوقيبات

US\$ 57,182

Other -

حصصيات أخرى -

-0-

Total Deductions

مجموع الحصصيات

US\$ 57,182

US\$ 57,182

AMOUNT OF THIS STATEMENT

مبلغ هذا الكنف

US\$ 1,086,469

US\$ 1,086,469

Contractor's Certificate :

1. I Certify that this invoice is true and correct and that all items for which payment is requested have been performed in compliance with the provisions of the contract.

2. I agree to be paid the amount recommended by the Engineer and shall make the adjustments made by the Engineer to this statement on my next statement.



A. P. Urban
Vice President

Title

10 November 1983

Date

APPROVAL & CERTIFICATE OF ENGINEER :

I Certify (1) that the items for which payment is requested have been satisfactorily delivered, tested, shipped or installed as appropriate to the project milestone for which payment is requested and that all services for which payment is requested have been satisfactorily performed (2) the payment requested is in accordance with the terms of the contract.

The amount the Engineer recommends to be paid to the contractor for this interim statement is _____

GILBERT ASSOCIATES, INC.

Project Manager

Date

Etablissement Public des Eaux de Figeh
المؤسسة العامة لمياه عين القبية

Project Engineer
مهندس المشروع

Project Director
مدير المشروع

Director, Major Projects
مدير مكتب المشاريع الرئيسية

Director, Finance
مدير الشؤون المالية

تمت الموافقة على الدفع
Approved for

Payment : _____

President Director General, EPEF
مدير عام المؤسسة العامة لمياه عين القبية

Date : _____ تاريخ

32

EPEF - DAMASCUS

PROJECT Dispatching System.....
 INTERIM STATEMENT N°118.04.....
 PERIOD ENDING10 November 1983.....

ADJUSTED NET PRICE OF WORKS TO DATE

Price of works to date (without training and operation assistance) - from page 3 -	US\$1,987,887	
Tender reduction 5 %	99,394	
Net price to date	US\$1,888,493	
Price adjustment- 2.9 %	54,766	
Adjusted net price - I	US\$1,943,259	US\$1,943,259
Price of operational assistance - from page 3 -		
Tender reduction 5 %		
Net price to date		
Price adjustment . %		
Adjusted net price II		
Training cost - see page 4		
25 % Addition (contract article 27)		
Total training cost		
Adjusted net price of works to date (To Page I)		US\$1,943,259

RETENTIONS

Total retention - previous statements	US\$ 39,980
Retentions this statement	57,182
Total retentions to date	97,162

32

EPEF - DAMASCUS

PROJECT Dispatching System

PAGE 3 OF 4

INTERIM STATEMENT N° 118.04

PERIOD ENDING 10 November 1983

**BASIS FOR PAYMENT REQUEST
CONTRACT EQUIPMENT, ETC.**

Price No.	DESCRIPTION	UNIT	QUANTITY	CONTRACT UNIT PRICE		CONTRACT EXTENDED PRICE		PERCENTAGE COMPLETION	AMOUNT CLAIMED	
				U.S. \$	L.S.	U.S. \$	L.S.		U.S. \$	L.S.
B.01	Central Processing Units consisting of:									
	HP2111F Central Processing Unit	Each	2	203,080		406,160		65	264,004	
	I/O Hardware	Each	4	13,857		55,428		65	36,028	
	Cabinet and Cabling	Each	2	8,123		16,246		65	10,560	
						<u>477,834</u>				
B.02	Main Memory	Lump Sum	1	Included in Price of B.01						
B.03	Bulk Memory consisting of:									
	Disc Drive	Each	2	109,509		219,018		65	142,362	
B.04	Peripherals consisting of:									
	Magnetic Tape Subsystem	Each	1	63,000		63,000		65	40,950	
	Printer	Each	1	5,260		5,260		65	3,419	
	System Console	Each	2	31,500		63,000		65	40,950	
						<u>131,261</u>				
B.05	CRT Display System	Lump Sum	1	372,558		372,558		65	242,163	
B.06	Loggers	Lump Sum	2	16,970		33,940		65	22,061	
B.07	Hard Copy Device	Lump Sum	1	Accommodated in Item B.06						
B.10	Master Station	Lump Sum	1	124,393		124,393		65	80,855	
B.11a	Remote Terminal Equipment, Large	Each	9	29,846		268,614		75	201,460	
B.11c	Remote Terminal Equipment, Small	Each	28	15,017		420,476		75	315,357	
B.12	RTU Test Equipment	Set	2	11,214		22,428		75	16,821	
B.13	Software									
	Operating System RTE6	Lump Sum	1	20,000		20,000		70	14,000	
	ACS SCADA System	Lump Sum	1	102,000		102,000		70	71,400	
	RTU Interface System	Lump Sum	1	102,000		102,000		70	71,400	
						<u>658,061</u>				

PRICE OF WORK TO DATE - TOTALS

TOTAL
(To Page 2) 1,573,790

EPEF - DAMASCUS

PROJECT Dispatching System

INTERIM STATEMENT N° 118.04

PERIOD ENDING 10 November 1983

PAGE 4 of 4

**BASIS FOR PAYMENT REQUEST
CONTRACT EQUIPMENT, ETC.**

Price No.	DESCRIPTION	UNIT	QUANTITY	CONTRACT UNIT PRICE		CONTRACT EXTENDED PRICE		PERCENTAGE COMPLETION	AMOUNT CLAIMED	
				U. S. \$	L. S.	U. S. \$	L. S.		U. S. \$	L. S.
B.13	cont'd)									
	Communications Preprocessor System	Lump Sum	1	102,000		102,000		70	71,400	
	Automatic Water System Programs	Lump Sum	1	332,061		332,061		-0-	-0-	
B.14	Documentation	Lump Sum	1	80,110		80,110		50	40,055	
B.20	Engineering Services	Lump Sum	1	403,523		403,523		75	302,642	
PRICE OF WORK TO DATE - TOTALS						3,212,216		TOTAL (To Page 2)	1,987,887	

Attachment A

Contract B Revisable Item Price Adjustment

- a. In accordance with Article 6, this adjustment applies to the U.S. Dollar components of the prices of the Work, except for training and operational assistance, as set forth in the Schedule of Prices and Estimate up to the effective date of the Contract.

The prices of Revisable Items will be adjusted from the Index for Electronic Components and Accessories published in the Bureau of Labor Statistics, Pricing Index No. 1178.

Index available as of one calendar month before the closing date (22 November 1981) for submission of proposal was the September 1981 Index = 170.8

Index available on the effective date of the Contract was the July 1982 Index = 175.8

$$\frac{ECa}{ECo} = \frac{175.8}{170.8} = 2.9\% \text{ adjustment increase}$$

Contract B Total		US\$ 4,506,821
Less:		
Training	US\$ 192,090	
Operational Assistance	<u>126,217</u>	
Deduct		<u>318,307</u>
Total to be adjusted (Po)		US\$ 4,188,514
Application of adjustment of 2.9%		<u>121,467</u>
Adjusted Total (Pa)		US\$ 4,309,981

- b. In accordance with Article 6, this adjustment applies to the U.S. Dollar components for training and operational assistance as set forth in the Schedule of Prices and Estimate up to the time of preparing a statement. This initial adjustment is up to the effective date of the Contract.

The prices of revisable items will be adjusted from the Hourly Earnings Index for Production or Non-Supervisory Workers on Private Non-Agricultural Payrolls by Industry Division, Services Published in Table 18 in the Monthly Labor Review of the U.S. Bureau of Labor Statistics.

Index available as of one calendar month before the closing date (22 November 1981) for submission of the proposal was the September 1981 Index = 139.8

Index available on the effective date of the contract was the July 1982 Index = 148.8

$$\frac{La}{Lo} = \frac{148.8}{139.8} = 6.4\% \text{ adjustment increase}$$

Contract B Training and Operational Assistance (Po)	US\$ 318,307
Application of adjustment of 6.4%	<u>20,371</u>
Adjusted Total (Pa)	US\$ 338,678

WARRANTY AND GUARANTEE

I, Anthony P. Urban, Vice President of G. E. Boggs & Associates, Inc. (GABA), with offices and place of business at 6862 Elm Street, McLean, Virginia 22101, USA, in accordance with Article 2.57.3 of the General Conditions of Contract No. 69/1981 dated 31 December 1981 entered into between Etablissement Public Des Eaux De Figehe (EPEF) of Damascus, Syria, and GEBA, warrant and guarantee that all work, materials, supplies and/or equipment irrespective of their present locations included in the Interim Statement No. 118.04 dated 10 November 1983 of said Contract No. 69/1981 are free of all liens, claims, security interests, and debts, and I undertake that ownership shall pass to EPEF free of all such encumbrances upon payment of the Interim Statement under reference as provided in the Contract. However, GEBA shall remain responsible for insurance and protection of the items not yet provisionally accepted by EPEF included in this Interim Statement. I further agree that the performance securities stipulated in Article 11 of the Contract also cover this undertaking.

G. E. BOGGS & ASSOCIATES, INC.

Date: 10 Nov 83

By: 

A. P. Urban
Vice President

**CONTRACTOR'S CERTIFICATE AND AGREEMENT WITH THE AGENCY FOR INTERNATIONAL DEVELOPMENT
CONTRACTOR'S INVOICE AND CONTRACT ABSTRACT**

I. INVOICE AND CONTRACT INFORMATION

1. Contractor's Name and Address G. E. Boggs & Associates, Inc. 6862 Elm Street McLean, Virginia 22101, USA		2. AID Number 276-K-010 276-K-01004	3. Contract is for a. <input checked="" type="checkbox"/> Professional Services b. <input type="checkbox"/> Construction Services c. <input checked="" type="checkbox"/> Equipment/Materials	
4. Contract Date 31 Dec. 1981	5. Total Contract Amt. \$4,648,659	6. Total Value Previously Received US\$759,628	7. Invoice Date 10 November 83	8. Invoice Amount US\$1,086,469

II. CONTRACTOR INFORMATION

9a. Small Business <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9b. Estimated Value (% of block 8) Furnished From Small Business N/A %	10a. Minority Business <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10b. Estimated Value (% of block 8) Furnished From Minority Business 0 %
---	--	---	--

III. INFORMATION AS TO COMMISSIONS, CREDITS AND ALLOWANCES

11. Names of Recipient(s)	12. Address(es)	13. Amount(s) Paid or to be Paid
N/A		

14. Additional Information or Explanation of Entries

EPEF Contract 69/1981 dated 31 December 1981

CONTRACTOR'S CERTIFICATE AND AGREEMENT WITH THE AGENCY FOR INTERNATIONAL DEVELOPMENT

The contractor hereby acknowledges that the sum indicated on the accompanying invoice as claimed to be due and owing under the terms of the contract identified above (hereafter referred to as "said contract") is to be paid, in whole or in part, out of funds made available by the United States under the Foreign Assistance Act of 1961, as amended. In consideration of the receipt of such sum, the contractor agrees with and certifies to AID as follows:

1. The undersigned is the contractor indicated in the above Invoice-and-Contract Abstract, is entitled under said contract to the payment of the sum claimed, and is executing this Certificate and Agreement for the purpose of obtaining such payment from funds made available by the United States as described above.

2. The contractor will, upon the request of AID, promptly make appropriate refund to AID, plus interest from the time of payment to the contractor, in the event of

- (a) his nonperformance, in whole or in part, under said contract, or
- (b) any breach by him of any of his undertakings in this Certificate and Agreement, or
- (c) any false certification or representation made by him in this Certificate and Agreement or in the above Invoice and Contract Abstract.

3. To the best of his information and belief, any commodity or service supplied under said contract is of the source and origin specified in the contract and/or Letter of Credit.

4. The amount shown in Block 8 above is net of all credits, allowances and discounts granted and payments made by the contractor or his agent to or for the account of the purchaser. The contractor will promptly pay to AID (Office of Financial Management, AID, Washington, D.C. 20523) any adjustment refunds, credits or allowances which hereafter become payable to or for the account of the purchaser arising out of the terms of said contract or the customs of the trade.

5. The contractor or his agent has not compensated any person to obtain said contract except to the extent, if any, indicated in Section III of the Invoice-and-Contract Abstract.

6. The contractor or his agent has not made and will not make any payment to or for the benefit of the purchaser, the purchaser's agent, or the Borrower/Grantee in the nature of a kickback.

7. Any commission paid or to be paid by the contractor to his agent in connection with the transaction for which payment is being requested under said contract is shown in Section III of the Invoice-and-Contract Abstract and does not exceed the lesser of 1) the amount customarily paid by the contractor in connection with similar transactions or 2) the amount customary in the trade.

8. The contractor or his agent has not given or received and will not give or receive any payment or benefit whatever in connection with or transaction or series of transactions which are covered by said contract other than those payments or benefits permitted under this agreement.

9. The contractor will for a period of not less than three (3) years after the date of final payment maintain all business records and other documents which bear on his compliance with any of the undertakings and certifications herein and will at any time requested by AID make such records and documents available to AID for examination or promptly furnish to AID such additional information as AID may request relating to such compliance.

10. The contractor has filled in all applicable portions of the above Invoice-and-Contract Abstract and certifies to the correctness of the information shown therein.

**PERSONAL CERTIFICATION BY NATURAL PERSON
SIGNING THIS CERTIFICATE AND AGREEMENT**

The natural person who signs this Certificate and Agreement hereby certifies either that he is the contractor or that he has actual authority to sign on behalf of the contractor and to bind the contractor with regard to all certifications and agreements contained in this Certificate and Agreement. He further certifies, if he is not personally the contractor, that either he is an employee of the contractor or he has written power of attorney to sign for, and bind the contractor. He acknowledges that he is signing and submitting this Certificate and Agreement for the purpose of receiving payment from AID funds and that AID in making funds available for such payment will rely upon the truth and accuracy of this Personal Certification as well as of all other representations in this Certificate and Agreement.

The Contractor's Certificate and Agreement and the Personal Certification herein shall be governed by and construed in accordance with the laws of the United States of America.

10 Nov 83 G. E. Boggs & Associates
 (Date) (Name of Contractor) I
 Vice President (Signature and Title)
 McLean, Fairfax County, Virginia USA
 Place executed (City, County, State, Country)

NOTES: (a) Any amendments of, or additions to, the printed provisions of this Contractor's Certificate and Agreement are improper and will not be considered a part hereof. (b) False statements herein are punishable by United States law. (c) The word "Copy" must be written after signature on all signed copies other than the original.

2/2

PRICE ITEM B.01, B.02 (Included in Price of B.01)

HP 2111F Central Processing Unit
I/O Hardware
Cabinet and Cabling

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved	1.S.118.03	\$230,794	50	2
Payment Requested	1.S.118.04	\$310,592	65	2+
Payment Requested	1.S.118.05	\$358,376	75	4

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o Inter-unit cabling diagrams/wiring lists, cabinet and card frame layouts.
- o Milestone 4 testing procedure.
- o Milestone 4 test (Hardware Integration)

COMMENTS/FINDINGS

- o Inter-unit cabling diagrams, wiring lists, cabinet and card frame layouts were received at GAI on December 16, 1983. The Contractor's checked dates on these drawings range from early 1983 to October 1983. The drawings were not issued to GAI for review at an earlier date due to ASC's standard QA procedure. This procedure requires that the equipment be assembled and operational prior to issuing drawings to the agent (Engineer) and client (Ultimate Owner). There were no major comments to the drawing package received on December 16, 1983 that pertained to price item B.01.
- o The equipment listed as B.01 was inspected during the evaluation trip with the following observations:
 - The units were operational with all card frames and cards installed. The cabinets were in proper order, the doors were removed but stored on the premises.
 - Production testing documentation listed a completion date of October 10, 1983.
 - QA inspection/testing documentation listed a completion date of November 16, 1983. The contractor had intended to provide the QA test document as the Milestone 4 test procedure. A review of the document by GAI indicated it would be acceptable following editing of a few paragraphs so the procedure is specific for this system.

DEFICIENCIES

- o The drawing package requires a resubmission following a few minor corrections according to GAI comments.
- o A test procedure for Milestone 4 has to be submitted.
- o Milestone 4 test, Hardware Integration, has to be run.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4, Hardware Integration. Since hardware integration has not occurred and in view of deficiencies listed, payment of 75% should not be made. GAI recommends payment of 70% of the extended price or \$334,484.

PRICE ITEM B.03

Bulk Memory: Disc Drive

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved	1.S.118.03	\$109,509	50	2
Payment Requested	1.S.118.04	\$142,362	65	2+
Payment Requested	1.S.118.05	\$164,263	75	4

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o Inter-unit cabling diagrams/wiring lists, cabinet and card frame layouts
- o Milestone 4 testing procedure
- o Milestone 4 test (Hardware Integration)

COMMENTS/FINDINGS

- o Inter-unit cabling diagrams, wiring lists, cabinet and card frame layouts were received at GAI on December 16, 1983. The Contractor's checked dates on these drawings range from early 1983 to October 1983. The drawings were not issued to GAI for review at an earlier date due to ASC's standard QA procedure. This procedure requires that the equipment be assembled and operational prior to issuing drawings to the agent (Engineer) and client (Ultimate Owner). There were no comments to the drawing package received on December 16, 1983 that pertained to price item B.03.
- o The computer room layout will need to be revised to allow for the bulk memory devices to be located next to the CPUs. Their distance from the CPU is limited by the speed of the data transfer which dictates the length of the cable supplied by the manufacturer. The computer room layout drawing was approved as part of an early Milestone package.
- o During the evaluation trip, the bulk memory devices (disc) were observed to be operational and utilized in testing the software.

DEFICIENCIES

- o The computer room layout is to be revised.
- o A test procedure for Milestone 4 has to be submitted.
- o Milestone 4 test, Hardware Integration, has to be run.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4, Hardware Integration. Since hardware integration has not occurred, payment of 75% should not be made. GAI recommends payment of 70.5% of the extended price or \$154,408.

42

PRICE ITEM B.04

Peripheral Equipment:

- o Magnetic Tape Subsystem
- o Printer
- o System Console

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved	1.S.118.03	\$65,630	50	2
Payment Requested	1.S.118.04	\$85,319	65	2+
Payment Requested	1.S.118.05	\$98,445	75	4

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o Inter-unit cabling diagram/wiring lists
- o Milestone 4 testing procedure
- o Milestone 4 test (Hardware Integration)

COMMENTS/FINDINGS

- o Inter-unit cabling diagrams wiring lists were received at GAI on December 16, 1983. The Contractor's checked dates on these drawings range from early 1983 to October 1983. The drawings were not issued to GAI for review at an earlier date due to ASC's standard QA procedure. This procedure requires that the equipment be assembled and operational prior to issuing drawings to the agent (Engineer) and client (Ultimate Owner). The major comment to the drawing package received on December 16, 1983 that pertained to price item B.04 was the lack of a cable list to identify cable markings, destinations and lengths.
- o During the project, the Contractor identified a need to substitute the original system consoles for an alternate model. GAI has recommended to Figh that they approve the substitution. Figh had not taken any action at the time of contract termination. Appendix C is a copy of GAI's recommendation to Figh for the substitution. The substitution of system consoles does not alter the contract price.

The equipment listed as B.04 was inspected during the evaluation trip with the following observations:

- o The items were operational and fully configured.
- o Production testing documentation listed a completion date of October 10, 1983.
- o QA inspection/testing documentation listed a completion date of November 16, 1983. The Contractor had intended to provide the QA test document as the Milestone 4 test procedure. A review

of the document by GAI indicated it would be an acceptable test procedure for the peripheral equipment.

DEFICIENCIES

- o A test procedure for Milestone 4 has to be submitted.
- o Milestone 4 test, Hardware Integration, has to be run.
- o A cable list has to be supplied with a minimum of information as listed in the Comments/Findings section.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4, Hardware Integration. Since hardware integration has not occurred and in view of the two other deficiencies listed, payment of 75% should not be made. GAI recommends payment of 70% of the extended price or \$91,882.

PRICE ITEM B.05

CRT Display System

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved	1.S.118.03	\$111,767	30	1
Payment Requested	1.S.118.04	\$242,163	65	2+
Payment Requested	1.S.118.05	\$279,419	75	4

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o Inter-unit cabling diagram/wiring list
- o Console Drawings
- o Milestone 4 testing procedure
- o Milestone 4 test (Hardware Integration)

COMMENTS/FINDINGS

- o Inter-unit cabling diagrams wiring lists frame layouts were received at GAI on December 16, 1983. The checked dates on these drawings range from early 1983 to October 1983. The drawings were not issued to GAI for review at an earlier date due to ASC's standard QA procedure. This procedure requires that the equipment be assembled and operational prior to issuing drawings to the agent (Engineer) and client (Ultimate Owner). The major comment to the drawing package received on December 16, 1983 that pertained to price item B.04 was the lack of a cable list to identify cable markings, destinations and lengths.
- o Brochures for the consoles have been approved by GAI on September 8, 1983. Detailed drawings of the specific consoles for the project have not been received.

The equipment listed as B.05 was inspected during the evaluation trip with the following observations:

- o The keyboards for the CRT display system lacked the physical lockout devices as required in Article 14.4.4 of the specification.
- o The CRT display system was operational.
- o Production testing documentation listed a completion date of October 10, 1983.
- o QA inspection/testing documentation listed a completion date of November 16, 1983.

- o The Contractor had intended to provide the QA test document as the Milestone 4 test procedure. A review of the document by GAI indicated it would be an acceptable document.
- o The cables to the CRTs were measured in order to confirm the correct length as scaled from the control/computer room layout drawing. Two cables were found to be short, thus, they will need to be remade.
- o The two work consoles for the CRTs stations in the control room and Dispatcher General office have not been designed nor purchased.

DEFICIENCIES

- o Physical lockouts will need to be installed on the keyboards.
- o A cable schedule has to be provided.
- o Detailed drawings of the consoles have to be provided.
- o New cables for two of the CRTs have to be produced.
- o A test procedure for Milestone 4 has to be submitted.
- o Milestone 4 test, Hardware Integration, has to be run.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4, Hardware Integration. Since hardware integration has not occurred and in view of deficiencies listed, payment of 75% should not be made. GAI recommends payment of 53% of the extended price or \$197,456.

PRICE ITEM B.06

Loggers

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Requested	1.S.118.04	\$22,061	65	2+
Payment Requested	1.S.118.05	\$25,455	75	4

MILESTONE REQUIREMENTS FOR PAYMENT(S) REQUESTED

- o General Catalogue Information
- o Configuration Diagram - ACS Dwg. SD 111381, Rev. 2, HPM Master station
- o Inter-unit cabling diagrams/wiring lists
- o Milestone 4 test procedure
- o Milestone 4 test (Hardware Integration)

COMMENTS/FINDINGS

- o Inter-unit cabling diagrams wiring lists were received at GAI on December 16, 1983. The Contractor's checked dates on these drawings range from early 1983 to October 1983. The drawings were not issued to GAI for review at an earlier date due to ASC's standard QA procedure. This procedure requires that the equipment be assembled and operational prior to issuing drawings to the agent (Engineer) and client (Ultimate Owner). The major comment to the drawing package received on December 16, 1983 that pertained to price item B.06 was the lack of a cable list to identify cable markings, destinations and lengths.
- o The configuration diagram has been approved on October 7, 1983 by GAI for the location of the loggers in the control room.

The loggers were inspected during the evaluation trip with the following observations:

- o The loggers were operational.
- o The general catalogue information for the loggers is available at the Contractor's facilities.
- o Production testing documentation listed a completion date of October 10, 1983.
- o QA inspection/testing documentation listed a completion date of November 16, 1983.

- o The contractor had intended to provide the QA test document as the Milestone 4 test procedure. A review of the document by GAI indicated it would be acceptable following deletion of a few superfluous paragraphs.
- o The cables to the loggers were measured to confirm the correct length as scaled from the computer/control room drawing. One cable was found to be short, thus, it will need to be remade.

DEFICIENCIES

- o A cable schedule has to be provided.
- o Stands for the printers have to be provided.
- o A new cable to one of the loggers has to be produced.
- o A test procedure for Milestone 4 has to be submitted.
- o Milestone 4 test, Hardware Integration, has to be run.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4, Hardware Integration. Since hardware integration has not occurred and in view of deficiencies listed, payment of 75% should not be made. GAI recommends payment of 68% of the extended price or \$23,079.

PRICE ITEM B.10

Master Station

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Requested	1.S.118.04	\$80,855	65	2+
Payment Requested	1.S.118.05	\$93,295	75	4

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o ACS Configuration Diagrams
- o Field Interface Diagrams/Wiring Lists
- o Milestone 4 test procedure
- o Milestone 4 test (Hardware Integration)

COMMENTS/FINDINGS

- o The ACS configurations diagrams and field interface diagrams/wiring lists were included in the drawing package received by GAI on December 16, 1983. Comments to the package that pertained to price item B.10 were:
 - Lack of sufficient detail and descriptive documentation for the communications buffer and peripheral switch.
 - Lack of redundant power supplies for the communications buffers and peripheral switches.

During the evaluation trip, the master station was inspected with the following observations:

- o The descriptive documentation for the communication buffers and peripheral switches were reviewed and found acceptable by GAI. The latest revision date on the document was September, 1983. The documentation is for a standard product and is updated as needed. It was not forwarded to GAI due to the termination of work and lack of a signed confidentiality agreement between the parties.
- o The operation of the master station was demonstrated during the inspection trip. All cards were properly configured in the cabinets. The doors were removed but stored on the premises.
- o Production testing documentation indicated a completion date of October 10, 1983.
- o QA inspection/testing documentation indicated a completion date of November 16, 1983.

- o The Contractor had intended to provide the QA test document as the Milestone 4 test procedure. A review of the document by GAI indicated it would be acceptable for price item B.10 inspection and testing.

DEFICIENCIES

- o The ACS configuration diagrams need to be revised to include additional detail on the peripheral switch and communications buffer.
- o The descriptive documentation will need to be issued for approval.
- o A redundant power supply will need to be added to the system to support the communications buffers and peripheral switch.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4, Hardware Integration. Since hardware integration has not occurred and in view of deficiencies listed, payment of 75% should not be made. GAI recommends payment of 67% of the extended price or \$83,343.

PRICE ITEM B.11.a,c

Remote Terminal Equipment, Large
Remote Terminal Equipment, Small

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Requested	1.S.118.04	\$516,817	75	4
Payment Requested	1.S.118.05	\$620,181	90	6

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o RTU Configuration Diagrams
- o MPR 3050 and 3010 RTU Cabinet Layout
- o Installation, Maintenance, and Operators Manuals
- o RTU Points List
- o Installers Connection/Wiring Lists
- o Milestone 6 test procedure
- o Milestone 6 test (Factory Acceptance Test)

COMMENTS/FINDINGS

- o The documentation requirements listed under the previous heading with the exception of the installers connection/wiring lists have been received by GAI prior to November 14, 1983. The comments from GAI for the requirements were resolved without changes, with the exception of the need for four additional control relays for the Fiegh Source remote terminal equipment. The relays were installed prior to the completion of the evaluation trip.

During the evaluation trip, the following two points were noted for price items B.11a and c:

- o The remote terminals were visually inspected. The criteria for the inspection was to confirm that the equipment were equipped according to the approved documentation and constructed in a satisfactory manner. The inspection was positive on all counts.
- o One of the small remote terminals was connected to the system for testing the software. The terminal provided a digital output point and an analog input point for the software system to process. Both points operated properly.

DEFICIENCIES

- o Lack of an Installers Connection/Wiring List.
- o Completion of a Factory Acceptance Test for Milestone 6.

RECOMMENDATION

The contractor is requesting payment of 90% which covers up to Milestone 6, Factory Acceptance Testing. Since the acceptance testing has not occurred and the Installers Connection/Wiring Lists have not been provided, a payment of 82% of the extended price or \$565,053 is recommended.

PRICE ITEM B.12

RTU Test Equipment

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Requested	1.S.118.04	\$16,821	75	4
Payment Requested	1.S.118.05	\$20,185	90	6

MILESTONE REQUIREMENTS FOR PAYMENT(S) REQUESTED

- o MPR 3000 Test Set Specification
- o Operator and Maintenance Manual
- o Milestone 6 test procedure
- o Milestone 6 test (Factory Acceptance Test)

COMMENTS/FINDINGS

- o The documentation requirements listed under the previous heading were received prior to November 14, 1983 and subsequently approved by GAI.
- o During the evaluation trip, a RTU test set was connected as a remote terminal unit to the master station for testing the software. A digital and an analog point were selected on the test set. The signal was transmitted to the master station with proper processing indicated on the dispatcher CRT.

DEFICIENCIES

- o Completion of a Factory Acceptance Test for Milestone 6.

RECOMMENDATIONS

The contractor is requesting payment of 90% which covers up to Milestone 6, Factory Acceptance Testing. Since the acceptance testing has not occurred, payment of 85% of the extended price or \$19,064 is recommended.

PRICE ITEM B.13

Software:

- o Operating System RTE6
- o ACS SCADA System
- o RTU Interface System
- o Communications Preprocessor System
- o Automatic Water System Programs

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved				
o Operating System RTE6	1.S.118.03	\$14,000	70	3
o ACS SCADA System	1.S.118.03	\$25,500	25	1-
o RTU Interface System	1.S.118.03	\$25,500	25	1-
o Communications Reprocessor System	1.S.118.03	\$25,500	25	1-
o Automatic Water System Programs	-0-	-0-	-0-	-0-
Payment Requested				
o Operating System RTE6	1.S.118.04	No Additional	Payment	
o ACS SCADA System	1.S.118.04	\$71,400	70	3
o RTU Interface System	1.S.118.04	\$71,400	70	3
o Communications Reprocessor System	1.S.118.04	\$71,400	70	3
o Automatic Water System Programs	-0-	-0-	-0-	-0-
Payment Requested				
o Operating System RTE6	1.S.118.05	No Additional	Payment	
o ACS SCADA System	1.S.118.05	No Additional	Payment	
o RTU Interface System	1.S.118.05	No Additional	Payment	
o Communications Reprocessor System	1.S.118.05	No Additional	Payment	
o Automatic Water System Programs	1.S.118.05	\$166,030	50	2

MILESTONE REQUIREMENT FOR PAYMENT(S) REQUESTED

- o Overview of individual modules
- o Milestone 3 test procedure
- o Milestone 3 test (Software Modules Tested and Accepted)

COMMENTS/FINDINGS

- o The Operating System RTE6 documentation has been approved by GAI prior to the Invoice 1.S.118.02 approval. The RTE6 and documentation are Hewlett Packard standard items.
- o Overview descriptions of the other systems except the automatic water system programs were approved by GAI. The overview for the RTU Interface System and Communications Reprocessor System were received by GAI on January 11, 1984. The overview for the ACS SCADA System was received on November 3, 1983 and approved by GAI on November 15, 1983. The Contractor stated that they were reluctant to submit software information to GAI until a confidentiality agreement was signed. The Contractor stated

54

that with the approval of these overviews, that portion of the Milestone requirements are satisfied. GAI contends that descriptions of individual modules within these systems must be provided for Milestone 3 to be met. The Contractor considers this as one level below their interpretation of the specification. They refer to this level as main modules. It should be noted that on GAI's approval of the ACS SCADA System overview, the following was included as a comment, "does not include software module documentation which has not yet been received by GAI". The specification Article in question is: 14.8.7.B.

During the evaluation trip, the listings for these three systems and their main modules and subroutines were reviewed. The listing included brief descriptions of the modules and routines. The dates for the last revisions on the individual listings were prior November 14, 1983 with a few exceptions. The Contractor explained that when a revision is made to a standard software module or routine, the disc and listings for all jobs are updated by QA at the same time. This is the reason that some listings contain a post November 14, 1983 date.

The Contractor is in the process of expanding the listings description for submission for what he thought was Milestone 5 requirement. The descriptions were 90% complete in typed preliminary draft for inhouse review. In addition, the Contractor had completed 100% of the flow charts for the main modules (Milestone 5 requirement) in rough draft with 75% redrawn in a submission form.

o During the evaluation trip, the Contractor provided a mini-demonstration of the software on the Figen SCADA System with the exception of the Automatic Water System Program. The demonstration covered selected operations, as listed below, which provided evidence that the modules were operating:

- Transferred files from the disc to the magnetic tape to the programmers I/O
- Listed files on the line printer
- Operated an output relay on an RTU
- Observed the calibration analog point of the RTU
- Observed displays constructed for the Figen project
- Edited a display
- Output a report on a logger
- Failed the system to the stand by disc
- Failed a disc to demonstrate operation of the system on one disc
- Switch peripherals from the display one-line by use of a light pen
- Processed digital and analog points from one of the test sets

During the demonstration, it was noted by GAI that an alarm had to be acknowledged from each of the CRTs as opposed to the

desirable method of one acknowledgement from any CRT. This is a discrepancy that will need to be corrected in the system. The module for processing alarms is part of the ACS SCADA System.

- o QA testing of the software was signed off on November 16, 1983. The QA test sheets were to be edited and provided as the test procedure for the Milestone 3 testing of individual modules.
- o A rough draft of the overview of the Automatic Water System Program was reviewed by GAI during the visit. The draft addressed general control and measurement features to be incorporated into the algorithm, plus included details that are in the specification. For the draft to be considered adequate for submission, additional specific details of the handling of individual stations should be provided.

The design of the Automatic Water System Program will include four of the Contractors optional software modules that are existing:

- Data Base Manager
- Historical Data Analysis Module
- Command Interpreter
- Automatic Control Module

With this approach to the system, the algorithm is the only outstanding module to be developed. GAI approves of the approach and reviewed the documentation of the four modules listed above during the trip to verify their existence.

DEFICIENCIES

- o Lack of detailed descriptions for the individual software modules as defined by GAI.
- o Undesirable feature of the alarm acknowledge function (ACS SCADA System).
- o More detail to be provided in the Automatic Water System Program Overview.
- o Lack of a Milestone 3 test procedure.

RECOMMENDATIONS

The Contractor is requesting payment for the individual systems as listed:

ACS SCADA System	70%
RTU Interface System	70%
Communications Preprocessor System	70%
Automatic Water System Programs	50%

Considering the progress toward Milestone 5 against the deficiencies as listed above a payment of the following percentage and extended price is recommended.

	%	Extended Price
Operating System RTE6	70	14,000
ACS SCADA System	53	54,060
RTU Interface System	65	66,300
Communications Preprocessor System	65	66,300
Automatic Water System Program	35	<u>116,221</u>
Total		\$302,881

PRICE ITEM B.14

Documentation

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved	1.S.118.03	\$ 8,011	10	1-
Payment Requested	1.S.118.04	\$40,055	50	2
Payment Requested	1.S.118.05	\$60,083	75	4

MILESTONE REQUIREMENTS FOR PAYMENT(S) REQUESTED

- o Equipment manuals with equipment
- o Inter-unit cabling diagrams/wiring lists prior to Milestone 4

COMMENTS/FINDINGS

- o The Hewlett Packard hardware and RTE6 operating system has been provided at the Contractor facilities.
- o The documentation for the system peripherals have been provided at the facilities and approved by GAI with the exception of the ACS master station as discussed in price item B.10, Master Station.

DEFICIENCIES

- o Lack of ACS hardware documentation (B.10).
- o Lack of documentation required for the commodity items which are the uninterruptible power source, diesel generator, mimic board, air conditioner, fire protection equipment, and strip chart recorders.

RECOMMENDATIONS

The Contractor is requesting payment of 75% which covers up to Milestone 4. Considering the listed deficiencies, GAI recommends a payment of 65% of the extended price or \$52,071.

PRICE ITEM B.20

Engineering Services

<u>PAYMENT STATUS</u>	<u>INVOICE NO.</u>	<u>AMOUNT</u>	<u>%</u>	<u>MILESTONE LEVEL</u>
Payment Approved	1.S.118.03	\$201,761	50	N/A
Payment Accepted	1.S.118.04	\$302,642	75	N/A
Payment Accepted	1.S.118.05	\$342,995	85	N/A

MILESTONE REQUIREMENTS FOR PAYMENT(S) REQUESTED

Engineering Services has no defined milestones. Engineering services are spread over activities related to reaching Milestones for equipment and software.

COMMENTS/FINDINGS

The Contractor has completed his engineering for the uninterruptible power supply, air conditioner, diesel generator, and fire protection equipment. Engineering is still required for items listed below.

DEFICIENCIES

The following items cannot be considered deficiencies but as outstanding items for completion of the engineering services:

- o Engineering will need to be performed by the Contractor in conjunction with the supplier to obtain approval of the mimic board.
- o Cabinet design for the strip chart recorders is yet to be completed.
- o The data base forms and followup work is remaining to be completed.
- o There will be continued limited engineering services to the end of the project.
- o Design of the system consoles will need to be provided.
- o Revised computer/control room floor layout will need to be provided due to bulk memory device relocation (Price Item B.03).

RECOMMENDATIONS

The Contractor is requestion payment of 85% of the price item. The amount of the payment has to be evaluated against the magnitude of services yet to be provided. GAI recognizes that the majority of the Contractors engineering services have been completed, so it is recommended that the 85% payment of the extended price or \$342,994 be paid.

59



Gilbert/Commonwealth engineers and consultants

GILBERT ASSOCIATES, INC., P. O. Box 1498, Reading, PA 19603/Tel. 215-775-2600/Cable Gilasoc/Telex 836-431

9 November 1983

Etablissement Public des Eaux de Figeh
Rue El Nassr
Damascus, Syria

Attention: Eng. M. Rida Mourtada
President Director General

Re: Dispatching System - Contract B
Equipment Substitution

Dear Mr. Mourtada:

GEBA/ACS has requested GAI to review the substitution of HP 2645 A programmers I/O terminals with HP 2621 B programmers I/O terminals. This letter provides EPEF with background on the GEBA/ACS request and GAI's recommendation for EPEF action on the request.

The SCADA system as proposed by GEBA/ACS does not provide for a system display of CPU errors as required by Specification Article 14.7.12.D. As stated in meeting minutes dated May 19, 1983, (Amendment to December 7 and 8, 1982, meeting minutes) GEBA/ACS were to identify and provide a system with the capabilities to meet these requirements.

As originally proposed the SCADA (ACS) operating system supports all dispatchers consoles visual display units, logger and events printers and the remote communications error status. The error status will be provided as a recallable system display on the visual display units. The Hewlett Packard operating system makes use of an internal error control and correction system and provides alarms on the programmers I/O console which displays error messages for the CPUs, disks, line printers and Magnetic tape unit.

The HP 2645 A receives the error message from the HP operating system for a one time display. If the error message is displayed during a time when the station personnel are absent from the computer room, the message could be replaced by another system message. Thus, the error message produced by the system would go unnoticed. Theoretically, the CPU memory could fail if errors continue to be produced by the memory and the error messages go unnoticed by the station personnel.

To provide a hard copy record of the error messages, plus other HP operating system messages, GEBA/ACS proposes the substitution of two HP 2621 B programmers I/O terminals for the two HP 2645 A terminals. One terminal will



Eng. M. Rida Mourtada
 9 November 1983
 - 2 -

be dedicated to each CPU.

The HP 2621 B terminals have integral thermal printers which provide a hard copy of the system messages that are directed to the programmers terminals. The HP 2621 B also provide hard copy of any input to the terminals by the station personnel. The copy of system inputs provides security for the system. The system programmers will also be able to utilize the hard copy of their inputs for editing and/or future reference.

Specification Article 14.7.6 requires two media for loading diagnostics. The primary media is the magnetic tape unit. To provide the second media and fulfill the requirement of the specifications, one of the HP 2645 A terminals will be retained with the system as a stocked spare for the HP 2621 B terminals.

The spare HP 2645 A can also be utilized for loading diagnostics upon failure of the magnetic tape unit by substituting it in the system for one of the HP 2621 B's. Both terminal types are hardware and software compatible to the system.

The cost comparison of the terminals as now proposed versus GEBA's original proposal is as follows:

HP 2621 B	\$1,295	Base	
Option 015	0	220 vac., 50 Hz	
Option 050	<u>1,210</u>	Thermal Printer	
	\$2,505	each x 2 units =	\$5,010
HP 2645 A	\$4,600	Base	
Option 015	0	220 vac, 50 Hz	
	<u>\$4,600</u>	each x 1 unit =	\$4,600
		Total	<u>\$9,610</u>

Original Proposal

HP 2645 A	4,600	Base	
Option 015	0	220 vac, 50 Hz	
	<u>4,600</u>	each x 2 units =	<u>\$9,200</u>

The cost to GEBA of the new proposal is \$410 more than the original proposal. GEBA will provide the three terminals required for the new proposal at no increase in the contract amount.

Based on the foregoing information, GAI recommends that EPEF approve the equipment substitution to utilize two HP 2621 B terminals and one 2645 A terminal. The HP 2645 A can be utilized as a second media for loading the system diagnostics and/or as a spare terminal for the HP 2621 B's. This

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Eng. M. Rida Mourtada

9 November 1983

- 3 -

combination of terminals provides a system that meets the requirements of the Specifications.

Very truly yours,

D.E. Lewis
Digital Systems Engineer

R. T. Kase
Director of Special Projects

DEL:RTK:tb

cc: D. G. Gallino/File
GAI Damascus
W. M. Mathews

12

CITY OF DAMASCUS WATER SUPPLY PROJECT
PUMPING STATION AND DISPATCHING SYSTEM
CONTRACT B TERMINATION REPORT
GRAPH OF INVOICES ACCORDING TO MILESTONE LEVEL

PRICE NO.	DESCRIPTION	MILESTONE LEVEL						
		1	2	3	4	5	6	7
		30% COMPLETE	50% COMPLETE	70% COMPLETE	75% COMPLETE	80% COMPLETE	90% COMPLETE	100% COMPLETE
B 01	CENTRAL PROCESSING UNITS CONSISTING OF: HP2111F CENTRAL PROCESSING UNIT 1 0 HARDWARE CABINET AND CABLING	●	●	●	●		●	●
B 02	MAIN MEMORY			INCLUDED IN PRICE ITEM B 01				
B 03	BULK MEMORY CONSISTING OF: DISC DRIVE	●	●	●	●		●	●
B 04	PERIPHERALS CONSISTING OF: MAGNETIC TAPE SUBSYSTEM PRINTER SYSTEM CONSOLE	●	●	●	●		●	●
B 05	CRT DISPLAY SYSTEM	●	●	●	●		●	●
B 06	LOGGERS	●	●	●	●		●	●
B 07	HARD COPY DEVICE			ACCOMMODATED IN ITEM B 06				
B 10	MASTER STATION	●	●	●	●		●	●
B 11a	REMOTE TERMINAL EQUIPMENT, LARGE	●	●	●	●	●	●	●
B 11c	REMOTE TERMINAL EQUIPMENT, SMALL	●	●	●	●	●	●	●
B 12	RTU TEST EQUIPMENT	●	●	●	●	●	●	●
B 13	SOFTWARE OPERATING SYSTEM RTEB ACS SCADA SYSTEM RTU INTERFACE SYSTEM COMMUNICATIONS PREPROCESSOR SYSTEM AUTOMATIC WATER SYSTEM PROGRAMS	●	●	●	●	●	●	●
B 14	DOCUMENTATION	●	●	●	●	●	●	●
B 20	ENGINEERING SERVICES	●	●	●	●	●	●	●

LEGEND:

- APPLICABLE MILESTONES TO PRICE ITEM
-  PREVIOUSLY PAID INVOICE AMOUNTS
-  INVOICES 110.04 & 110.05 LEVELS
- ▼ RECOMMENDED PAYMENT

DEFINITION OF MILESTONES:

MILESTONE NO.	DESCRIPTION	MAXIMUM PAYMENT FOR PRICE ITEM
1.	DELIVERY OF MAJOR HARDWARE (COMPUTERS, ETC.) TO CONTRACTOR'S FACILITIES	UP TO 30%
2.	HARDWARE SUBSYSTEMS TESTED AND ACCEPTED	UP TO 50%
3.	SOFTWARE MODULES TESTED AND ACCEPTED	UP TO 70%
4.	HARDWARE INTEGRATION	UP TO 75%
5.	SOFTWARE INTEGRATION	UP TO 80%
6.	FACTORY ACCEPTANCE TEST	UP TO 90%
7.	FREIGHT AND INSURANCE TO DAMASCUS, PREPAID	UP TO 100%



FIGURE 1

CITY OF DAMASCUS WATER SUPPLY PROJECT
PUMPING STATION AND DISPATCHING SYSTEM
CONTRACT # TERMINATION REPORT
BREAKDOWN OF SEBA INVOICES AND GAI RECOMMENDED FINAL PAYMENT



FIGURE 2

PRICE NO	DESCRIPTION	UNIT	QUANTITY	CONTRACT UNIT PRICE	CONTRACT EXTENDED PRICE	SEBA INVOICES						PAYMENT RECOMMENDED BY GAI		PAYMENT RECOMMENDED LESS PAYMENT MADE U.S. \$		
						PAYMENT APPROVED		AMOUNTED CLAIMED				% COMPLETE	U.S. \$		% COMPLETE	U.S. \$
						118 03		118 04		118 05						
						U.S. \$	U.S. \$	% COMPLETE	U.S. \$	% COMPLETE	U.S. \$	% COMPLETE	U.S. \$		% COMPLETE	U.S. \$
B 01	CENTRAL PROCESSING UNITS CONSISTING OF: MP2111F CENTRAL PROCESSING UNIT I/O HARDWARE CABINET AND CABLING	EACH	2	203,000	477,834	50	203,000	65	264,004	75	304,620	70	284,312	81,232		
				13,857	406,160	50	27,714	65	38,028	75	41,571	70	38,000	11,086		
				0,123	16,246	-0-	-0-	65	10,560	75	12,185	70	11,372	11,372		
B 02	MAIN MEMORY		1	INCLUDED	IN PRICE OF B 01											
B 03	BULK MEMORY CONSISTING OF: DISC DRIVE	EACH	2	109,509	219,018	50	109,509	65	142,362	75	164,263	70.5	154,408	44,899		
B 04	PERIPHERALS CONSISTING OF: MAGNETIC TAPE SUBSYSTEM PRINTER SYSTEM CONSOLE	EACH	1	63,000	131,261	50	31,500	65	40,950	75	47,250	70	44,100	12,600		
				5,260	63,000	50	2,630	65	3,419	75	3,945	70	3,682	1,052		
				31,500	63,000	50	31,500	65	40,950	75	47,250	70	44,100	12,600		
B 05	CRT DISPLAY SYSTEM	LUMP SUM	1	372,558	372,558	30	111,767	65	242,183	75	279,419	53	197,456	85,689		
B 06	LOGGERS	LUMP SUM	2	16,970	33,940	-0-	-0-	65	22,061	75	25,455	68	23,079	23,079		
B 07	HARD COPY DEVICE			ACCOMMODATED	IN ITEM B.06											
B 10	MASTER STATION	LUMP SUM	1	124,393	124,393	-0-	-0-	65	80,855	75	93,295	67	83,343	83,343		
B 11a	REMOTE TERMINAL EQUIPMENT, LARGE	EACH	9	28,826	268,614	-0-	-0-	75	201,480	90	241,753	82	220,263	220,263		
B 11c	REMOTE TERMINAL EQUIPMENT, SMALL	EACH	20	15,017	420,478	-0-	-0-	75	315,357	99	378,428	82	344,790	344,790		
B 12	RTU TEST EQUIPMENT	SET	2	11,214	22,428	-0-	-0-	75	16,821	90	20,185	85	19,064	19,064		
B 13	SOFTWARE OPERATING SYSTEM RTE6 ACS SCADA SYSTEM RTU INTERFACE SYSTEM COMMUNICATIONS PREPROCESSOR SYSTEM AUTOMATIC WATER SYSTEM PROGRAMS	LUMP SUM	1	20,000	658,061	70	14,000	70	14,000	70	14,000	70	14,000	14,000		
				102,000	102,000	25	25,500	70	71,400	70	71,400	53	54,060	28,560		
				102,000	102,000	25	25,500	70	71,400	70	71,400	65	66,300	40,800		
				102,000	102,000	25	25,000	70	71,400	70	71,400	65	66,300	40,800		
				332,061	332,061	-0-	-0-	-0-	-0-	50	168,830	35	116,221	116,221		
B 14	DOCUMENTATION	LUMP SUM	1	80,100	80,110	10	8,011	50	40,055	75	60,083	65	52,071	44,060		
B 20	ENGINEERING SERVICES	LUMP SUM	1	403,523	403,523	50	201,761	75	302,642	85	342,995	85	342,994	141,233		
	PRICE OF WORK TO DATE - TOTALS				3,212,216		817,972		1,987,887		2,458,927		2,180,715	1,376,743		