



Gail S. Habicht, PhD. 09-30-2003  
Vice President for Research  
The Research Foundation of State University of New York (Stony Brook University)  
Office of Sponsored Programs  
Stony Brook, NY 11794-3362

Reference: RAN-A-00-03-00099-00

Subject: Higher Education and Development in Iraq - Culture

Dear Mrs. Habicht,

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the U.S. Agency for International Development (USAID) hereby awards to Stony Brook University (hereinafter referred to as the "Recipient"), support for a program in Higher Education and Development in Iraq - Culture as described in the Schedule of this award and in Attachment 2, entitled "Program Description."

This award is effective and obligation is made as of the date of this letter and shall apply to expenditures made by the Recipient in furtherance of program objectives during the period beginning with the effective date and ending 09-30-2004. USAID will not be liable for reimbursing the Recipient for any costs in excess of the obligated amount.

This award is made to the Recipient on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1 (the Schedule), Attachment 2 (the Program Description), and Attachment 3 (the Standard Provisions), all of which have been agreed to by your organization.

Sincerely yours,

Sheila Bumpass  
Agreement Officer  
M/OP/REG/ALPS

Attachments:

- A. Schedule
- B. Program Description
- C. Standard Provisions

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## **SCHEDULE**

### **A.1 PURPOSE OF AGREEMENT**

The purpose of this Agreement is to provide support for the program described in Attachment 2 to this Agreement entitled "Program Description."

### **A.2 PERIOD OF AGREEMENT**

1. The effective date of this Agreement is 09-30-2003. The estimated completion date of this Agreement is 09-30-2004.

2. Funds obligated hereunder are available for program expenditures for the estimated period 09-30-2003 to 09-30-2004.

### **A.3 AMOUNT OF AWARD AND PAYMENT**

1. The total estimated amount of this Award for the period shown in A.2.1 above is \$4,131,274.00.

2. USAID hereby obligates the amount of \$4,131,274.00 for program expenditures during the period set forth in A.2.2 above and as shown in the Budget below. The recipient will be given written notice by the Agreement Officer if additional funds will be added. USAID is not obligated to reimburse the recipient for the expenditure of amounts in excess of the total obligated amount.

3. Payment shall be made to the Recipient by Letter of Credit in accordance with procedures set forth in 22 CFR 226.52.

### **A.4 BUDGET**

Revisions to the Agreement budget shall be made in accordance with 22 CFR 226.

### **A.5 REPORTING AND EVALUATION**

#### **1. Financial Reporting**

The Recipient shall submit an original and 3 copies quarterly. Financial Reports shall be in keeping with 22 CFR 226.52.

Recipients shall list each country included in the program and the total amount expended for each country under the award for the reporting period in the "Remarks" block on the "Financial Status Report" SF-269 or SF-269A, or on a separate sheet of paper with the "Request for Advance or Reimbursement" SF-270.

In accordance with 22 CFR 226.52 the SF 269 and 272 will be required on a quarterly basis. The recipient shall submit these forms in the following manner:

- 1) The SF 272 and 272a (if necessary) will be submitted via electronic format to the U.S. Department of Health and Human Services (<http://www.dpm.psc.gov>). A copy of this form shall also be simultaneously submitted to the Agreement Officer and the Cognizant Technical Officer.

2) The SF 269 or 269a (as appropriate) shall be submitted to the Cognizant Technical officer with one copy to the Agreement Officer

3) In accordance with 22 CFR 226.70-72 the original and two copies of final financial reports shall be submitted as follows: M/FM, the Agreement Officer (if requested) and the CTO. The electronic version of the final SF 272 or 272a shall be submitted to HHS in accordance with paragraph (1) above.

**2. Program Reporting**

The Recipient shall submit an original and one copy of a performance report to USAID/LAC/RSD, the Cognizant Technical Officer, 1300 Pennsylvania Ave, Washington, DC 20523-2052. The performance reports are required to be submitted semi-annually and shall contain the following information:

Progress of the program against performance benchmarks in the Annual Work Plan (See Below); Progress on program development and implementation, organizational and budgetary matters, gender considerations, and other relevant issues; Problems encountered during the reporting period and steps taken to resolve; and Lessons learned from implementation of the project, including training.

\*Include Work Plan

**3. Final Report**

The Recipient shall submit the original and one copy to the Cognizant Technical Officer, the Agreement Officer, and one copy to USAID Development Experience Clearinghouse, ATTN: Document Acquisitions, 1611 N. Kent Street, Suite 200, Arlington, VA 22209-2111 (or e-mail: docsuubmit@dec.cdie.org).

The final performance report shall contain the information in 22 CFR 226.51(d).

Recipients shall list each country included in the program and the total amount expended for each country under the award for the reporting period in the "Remarks" block on the "Financial Status Report" SF-269 or SF-269A, or on a separate sheet of paper with the "Request for Advance or Reimbursement" SF-270.

**A.6 INDIRECT COST RATE**

Pending establishment of revised provisional or final indirect cost rates, allowable indirect costs shall be reimbursed on the basis of the following negotiated provisional or predetermined rates and the appropriate bases:

Description	Rate
1/Facilities and Administrative Cost Rates	50.5%
2/Fringe Benefits Rates	31%, 16.5%

1/Base of Application: Modified total direct costs, consisting of all salaries and wages, fringe benefits, materials, supplies, services, travel, and subgrants and subcontractors up to the first \$25,000 of each

subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000. Type of Rate: Provisional; Period: 07/01/03 until amended

2/Base of Application: Salaries and wages. Type of Rate: Provisional; Period: 07/01/03 until amended

**A.7 TITLE TO PROPERTY**

Property Title will be vested with the Cooperative Country.

**A.8 COST SHARING**

The Recipient agrees to expend an amount not less than 15% of the total activity costs.

**A.9 NOTIFICATION**

The recipient will notify the USAID Press Office in the Bureau of Legislative and Public Affairs (LPA) of all contact with the news media related to the HEAD program.

**A.10 EXECUTIVE ORDER ON TERRORISM FINANCING**

The Contractor/Recipient is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the contractor/recipient to ensure compliance with these Executive Orders and laws. This provision must be included in all subcontracts/subawards issued under this contract/agreement.

## PROGRAM DESCRIPTION

### Higher Education and Development Program (HEAD)

#### Summary

This HEAD activity will establish partnerships between U.S and Iraqi colleges and universities to invigorate and modernize Iraq's institutions of higher education. This program will provide technical expertise to Iraq's universities and technical colleges, and engage Iraqi higher education administrators, faculty, and students in the revitalization of the substance and process of Iraq's higher education system.

HEAD will compliment USAID's primary and secondary education program by establishing tertiary level activities that promote national, regional and international partnerships and cultivate intellectual diversity and growth; introduce innovative subject material and new courses to develop the quality of higher education in Iraq and to prepare Iraqi youth for leadership and employment in a competitive market economy; introduce modern administrative practices that orient higher education institutions to the demands of the market; and provide rapid impact grants to enable Iraqi colleges and universities to replace antiquated equipment and rehabilitate educational facilities and libraries. The program will be implemented through Cooperative Agreements with up to 6 U.S colleges or universities (or consortia of colleges and universities, including international institutions), each responsible for establishing partnerships with Iraqi institutions.

This Cooperative Agreement is intended to be a flexible way to enable U.S. universities to develop partnerships with Iraqi universities, allowing maximum leeway for creativity in the formation of each partnership. It is expected that benefits will be reciprocal, strengthening Iraqi universities, while at the same time enriching U.S universities with respect to the culture of Iraqi higher education and related development issues.

Recipients will facilitate higher education development by providing targeted technical assistance, training, and grants to Iraqi universities for materials (i.e. library, laboratory, or refurbishment of facilities) and monitoring oversight.

#### Background

USAID's program in Iraq seeks to achieve the following four objectives:

**Restore Economically Critical Infrastructure:** Reconstruction assistance will rehabilitate critical infrastructure to help maintain stability, ensure the delivery of essential services, and facilitate economic recovery. Iraq's roads and ports will be rehabilitated to meet the needs of citizens and facilitate transportation of humanitarian assistance, as well as commercial imports and exports. Potable water and sanitation services will be reestablished to prevent disease. Assistance also will restore the power supply to health and educational facilities, water supply facilities, and infrastructure that contribute to the local economy and employment generation.

**Support Essential Health and Education Services:** Assistance will restore basic healthcare services to vulnerable populations and focus on strengthening the national education system. Programming will include the delivery of essential drugs, equipment, and supplies to health facilities, and will assist in health and disease assessment. Health assistance also will supply health information and education to the public, build the management capacity of Iraqi counterparts, and promote fair and open access to health services. Education assistance will increase access to primary and secondary public education for Iraqi children, promote retention of students in the classroom, strengthen school administration, and develop

re-entry programs for out-of-school youth. NOTE: there will be no requirement that textbooks will be produced or distributed under any grants. Any teacher or student training materials must be approved by USAID

**Expand Economic Opportunity:** Reconstruction assistance will promote a competitive private sector, generate employment opportunities, and improve agricultural productivity. Activities will include extending credit to small and micro-enterprise businesses; developing local, regional, and international business networks; and providing workforce development and training. Agricultural assistance will supply agricultural inputs for the spring and winter planting season, address livestock and poultry diseases and farmers will be trained to use modern agricultural technologies to enhance profitability and competitiveness.

**Improve Efficiency and Accountability of Government:** Reconstruction assistance will foster social and political stability by helping meet citizens' basic needs within their communities. Programming will provide Iraqis with the opportunity to participate in public decision-making. Technical assistance will strengthen the capacities of local administrations to manage and deliver services such as potable water, education, and healthcare. Programming will be structured to support the development of local and national nongovernmental organizations (NGOs) and civil society organizations. Technical assistance will also support the preparation and implementation of an appropriate legal framework for decentralized government.

Tertiary level education activities will complement these activities and will support USAID's overall program in Iraq.

With the advent of Islam and the flourishing of the Arab-Islamic civilization, which reached its peak during the Abbasids, Baghdad became the world center of culture, knowledge, and creativity, attracting scholars, men of letter and intellectuals from all over the world. In the past, Iraqi universities have been important regional and world institutions of learning. Literacy was reported to be among the highest in the region and the country boasted 22 universities and institutes of higher education.

Iraq's invasion of Kuwait and the aftermath of the 1991 Gulf War further devastated a weakening education sector under Saddam Hussein's regime. It is reported that students have very little motivation to get university degrees. Competition has oftentimes been seen as futile, with perceptions of a lack of merit-based entrance into academic institutions in some cases and a weak economy that provides limited career opportunities.

The neglect of higher education at both secondary and university levels has created long-term shortages of qualified teachers and manpower, vital for the country's future reconstruction and development. A significant number of engineers, doctors, and skilled professionals have left Iraq. Official Iraqi statistics show that 4,000 university professors have left due to economic hardships and internal oppression. Those who remain accept less skilled employment with many requiring two or three jobs to augment their needed income.

## **Program Description**

This program will be implemented under USAID Strategic Objective 2.1 "Improve access to quality education"; however, as mentioned above, it will support all strategic objectives with the sectoral areas of concentration.

### **1. Introduction and Overview**

The proposed Stony Brook-led initiative focuses on two challenges:

- To provide the tools and training to enable faculty at Iraqi universities to modernize curricula in archaeology and Assyriology and conduct research using modern analytical methods;
- To provide the tools and training to enable faculty at Iraqi universities to develop curricula in environmental health and conduct environmental research programs using modern techniques and methods.

The long-term objective of our proposal is to provide the tools for Iraqi Universities to develop modern academic programs in these two areas, while at the same time playing an important role in the current relief and rebuilding phase of the country. To meet the short-term and long-term objectives, tools and training will be delivered to four Iraqi universities (Baghdad University, Al Mustansiriyah University in Baghdad, Mosul University and Basra), representing the three regions identified by USAID. These tools, such as access to inter-library loan, a digital, telephone and internet access, re-equipped teaching labs in both archaeology and environmental health, and environmental testing labs can be deployed in the first year. More sophisticated tools, such as geographical information system (GIS) (see section 4.4) and a web-enabled library (section 4.5) will be deployed if the grant is extended for more than one year, once the basic teaching and research needs of the faculty have been met. Training in the use of these tools will be conducted through a combination of intensive workshops both in the US and on site. To deliver the workshops, Stony Brook will draw upon its faculty as well as faculty from Columbia University, Boston University and Oxford University. The strategy is for Iraqi scientists to take over training as the project matures and build long-lasting collaborations with Stony Brook faculty. While the implementation of the proposed plan will involve four of the 14 major Iraqi universities, it will also benefit other Iraqi institutions. In particular, a web-based library system can be made available to all 24 Iraqi institutions of higher education. Furthermore, travel funds will be made available to faculty at other Iraqi institutions to participate in intensive training courses offered at any of the four Iraqi partner institutions. This strategy is expected to lead to enhanced collaboration among Iraqi universities, one of the key strengths of the American academic system.

With intensive training prior and during the deployment of the tools, Iraqi scientists will be able to create state-of-the-art information systems that will assist the new government in protecting the more than 10,000 archeological sites around the country as well as address some of the most pressing environmental health problems faced by its people. As the relief and rebuilding phase transitions into a phase of normal activity, Iraqi scientists will be able to use their experience and tools to train a new generation of Iraqi scholars and undertake archeological and environmental research. The proposed plan described below will also foster joint Stony Brook and Iraqi academic research programs as well as visiting student programs that will be the foundation for long-lasting US-Iraq academic collaborations. At that stage, Stony Brook faculty can become research collaborators, leveraging some of the universities unique capabilities and expertise. The proposed plan is a roadmap for Iraqi universities to catch up with modern technology, develop modern curricula, conduct research, and return Iraqi academic institutions to the prominence they once enjoyed in the Middle East.

The first challenge, enabling Iraqi Universities to develop and conduct modern Archeological research, leverages the long-standing research programs and connections of Drs. Elizabeth Stone (Stony Brook University), Paul Zimansky (Boston University & Stony Brook adjunct), Marc Van De Mieroop (Columbia University), Iraqi-born Zainab Bahrani (Columbia University & Stony Brook adjunct), and Jeremy Black (Oxford University) with Iraqi scientists and institutions. In the mid-1970s Drs. Stone and Zimansky both participated in the Nippur Expedition, and Dr. Stone, supported by a Ford Foundation Grant, spent six weeks working on materials in the Iraq Museum. In 1986 Dr. Stone was the first Fulbrighter to Iraq since the 1967 war, a trip that saw the initiation of the Mashkan-shapir and the Tell Hamida Archaeological Field Projects, both directed jointly by Stone and Zimansky. Stone and Zimansky



were also the first foreign archaeologists to document damage to the site of Ur during the first Gulf War, and Dr Stone visited Iraq again in 1994 and in May 2003, in the latter instance as part of a National Geographic team documenting damage to archaeological sites. As an official of the British School of Archaeology in Iraq (the Director for much of the time) Dr. Black lived in Baghdad from 1982 to 1988, traveled widely in the country and thus has familiarity with most regions. He participated in excavations; pursued his own research mostly in the Iraq Museum and other regional museums (Mosul, Kirkuk, Nasiriya) and learned reasonably fluent Iraqi Arabic. Drs. Bahrani (an Iraqi-American and thus bilingual in Arabic and English) and Van De Mierop conducted research in Iraq in the mid 1980s. Drs. Stone, Zimansky, and Bahrani also visited Iraq in June 2003 and deployed a single GIS system with recent satellite imagery and the locations of the some 10,000 archeological sites to assist the Iraq Museum in site preservation. While there, they had the opportunity to meet with Deans and faculty from Baghdad and Mosul Universities. Letters of support from the Chair of the Archeology Program at Baghdad University and the President of Mosul University are presented in Appendix B. The second challenge, enabling Iraqi Universities to develop and conduct modern environmental research and training, leverages Stony Brook's unique research and training programs in environmental health, environmental science, and hydrogeology. There will be substantial involvement of Iraqi University leaders in this effort. This challenge will be directed by Iraqi-born Wajdy Hailoo, M.D. Wajdy Hailoo received his medical training at Mosul University and held leadership positions in Basra and Baghdad before leaving the country, see CV in Appendix D. He is currently Division Head of Environmental and Occupational Health at Stony Brook, but has maintained close contacts with peers in Iraq. Using these connections he has been able to make contact with the Dean of the College of Medicine at Baghdad and the Dean of the College of Medicine at Al Mustansiriyah University in Baghdad. We also have sought the advice from Dr. Alim Yacoub, former Dean of the College of Medicine at Al Mustansiriyah University and now Professor in the Department of Community Medicine at Al Mustansiriyah University, and Dr. Shawky Marqus, former Deputy Minister of Health in Iraq. Dr. Marqus was the Chief Iraqi negotiator for the UN Oil-for-food program before he immigrated to Canada two years ago. Dr. Shawky Marqus has agreed to be actively involved in our proposed program. Our proposed effort is also endorsed by the International Society of Iraqi Scientists. This US-based interest group will provide access to its membership that will facilitate our efforts when appropriate.

## **1.1. OVERVIEW OF ORGANIZATION AND MANAGEMENT OF INITIATIVE**

Stony Brook University will be the lead agency. The Research Foundation of the State University of New York (RF-SUNY) will be the fiscal agent for the award. RF-SUNY has considerable experience in overseeing complex programs, including many USAID programs. The RF-SUNY office at Stony Brook handles several large projects, including a USAID project in Eritrea, see Appendix A. Columbia University, Boston University, and Oxford University will be entering into a subcontract if this application is successful. Dr. Elizabeth Stone and Dr. Wajdy Hailoo, M.D. will be the principle investigators, with Dr. Stone as the overall project director. Dr. Stone will also direct the Archeology Challenge and Dr. Wajdy Hailoo will direct the Environmental Health Challenge. Each of the Challenge Directors will be assisted by a Challenge coordinator and a small support staff, see Cost Proposal Section for details. We propose to create a small office in Iraq that will coordinate activities in Iraq. This office will also be responsible for payment of Iraqi personnel, travel grants to Iraqi faculty, as well as property control. In addition, we will appoint an Iraqi coordinator/liaison at each of the four institutions. The national office as well as the offices of the four coordinators will be equipped with US-based telephone and internet service via satellite or microwave technology. An advisory board chaired by Iraqi-born Dean of SBU College of Engineering and Applied Sciences, Dr. Yacov Shamash, with representation from the Iraqi partner institutions as well as US experts representing contributing disciplines will be formed for Challenge 2.

## **2. Challenge 1: Archaeology**

## **2.1. INTRODUCTION**

### **2.1.1. Importance of Archaeology in Iraq**

The borders of modern Iraq coincide largely with what is perhaps the most important part of the world for archaeology. Northern Iraq was the findspot of the Shanidar Neanderthal skeletons, key elements in our understanding of human evolution, and also provided critical information on the transition from hunting and gathering to agriculture. Indeed, this area served as the fulcrum between eastern traditions focusing on animal domestication and western traditions that stressed plant domestication. Iraq is best known, however, as the "Cradle of Civilization." The southern part of the country saw the rise of the world's first cities, the first writing, the first full time professionals, even the first large scale democratic institutions in the form of assemblies. Moreover, ancient Mesopotamia is not just the world's first civilization, but the most understandable of the six classic early exemplars (Mesopotamia, Egypt, Indus Valley, China, Mesoamerica and Peru). The large, populous cities built of mud-brick have preserved details of the lives of elites and nonelites alike in ways that are unparalleled elsewhere, but more importantly, their literacy and the fact that they wrote on clay, a material which preserves well in this desert environment, provides a still more detailed picture. Mesopotamian civilization lasted some four thousand years, to be superseded by the Persian, Parthian, Sassanian and Islamic periods. Iraq continued to play a major role and have significant archaeological remains for all of these periods.

### **2.1.2. Current situation in Iraqi Universities**

Given the importance of providing immediate aid to our Iraqi colleagues, this proposal focuses initially on developing cooperative programs with Baghdad and Mosul Universities. In June 2003, Drs. Stone, Zimansky and Bahrani had the opportunity to visit the Department of Archaeology at Baghdad University, and also to discuss our proposal with Dr. Ali Yasin, who has been the chair of both the Department of Archaeology and the Department of Cuneiform Studies at Mosul University. In the late 1980s Baghdad University was the premier location for the training of students in archaeology. Dr. Walid al-Jadir, the excavator of Sippar, was teaching at the University, as was the Assyriologist Dr. Farouk al-Rawi. Since then Dr. al-Jadir has died and Dr. al-Rawi has immigrated to Britain. In addition to being cut off from access to modern scholarship during the period of the sanctions, like all Iraqi Universities, the Arts faculty was starved for funds. In April, 2003, the arts faculty was looted, their one computer and several opaque projectors stolen, their cast collection destroyed, and the main library burned. We have received different reports on the fate of the departmental library, such as it was. It is said to have been in the house of Dr. Abdullilla Fadhil and therefore intact. However, Dr. Fadhil has been removed from his position at chair and the current chair, Dr. Ghazi Mohammed, indicated that they had no books, not even the critical reference volumes of the Chicago Assyrian Dictionary. We understand that the University of Chicago will be providing them with copies of that reference work, however. Our visit to Baghdad University made clear not only the generally high quality of the faculty and their eagerness for improved contacts with the outside world, but also how basic their needs are. Before the latest war they had only one computer for the entire department, and their main teaching aids were opaque projectors and chalkboards. There are currently 17 faculty members and some 200 undergraduate students, as well as 6 MA students and one working on a PhD. Under these circumstances the first steps in reviving this program involves providing teaching, computer, communication and library facilities to our Iraqi colleagues, training in these areas, and workshops which will allow our colleagues to catch up with the work done in Near Eastern Archaeology and Cuneiform Studies over the past decade and a half. Only once this is accomplished would it be appropriate to introduce some of the more advanced technical analytic tools.

We were unable to visit Mosul University, but did spend several hours discussing the situation there with Dr. Ali Yasin Ahmed, the former chair of Department of Archaeology and the Founding Chair of the new

program in Cuneiform Studies. The latter was a very ambitious project, supported by the previous Iraqi regime, but it is not clear that this will continue. Today there are two faculty members in the program, around 64 undergraduate students and 6 graduate students. Dr. Ali Yasin is no longer the chair of the department (it is not clear who is since the other faculty member is very junior). The Archaeology Department has 6 faculty members and around 120 undergraduate students. We do not have any information on the number of graduate students. We suspect that the two programs will be rolled back together in the future, but no decisions of this kind have been made to date. The two Departments are in close physical proximity to one another, and both were looted, with computers and other research and teaching tools stolen or destroyed. In both Baghdad and Mosul, the resumption of teaching shortly after the end of the war has meant that the faculty have had no time to recover from the destruction of their facilities, and little in the way of aid has come their way.

We also need to be aware that some of those who have risen in these fields did so as a result of their party membership. Thus some very good archaeologists and Assyriologists are working at minor institutions, while those with less talent but better positioned politically were in higher positions, although as noted above, the current process of deBa'athification is changing that. Thus, though this program focuses on the major centers at Baghdad and Mosul, an effort will be made to include faculty from other universities in the training program. No discussion of archaeology and Assyriology in Iraq is complete without a consideration of the Department of Antiquities. Although this is a government institution and not part of the University system, there has always been a revolving door between the department and the universities. For example, Dr. Donny George, the Director of Research for the Department of Antiquities, received his PhD. from Baghdad University, while Dr. Muhammad Madhloom, one of the senior faculty at Baghdad University, was a long-term employee of the Department of Antiquities attached to the Mosul Museum. Indeed, most members of the Department return periodically to the Universities to acquire higher degrees. The publicity surrounding the looting of the Iraq Museum means that the Department will receive as much outside aid as it needs, but any project offering training to University employees would be well served if a few Department employees were included, especially since this will not add to the cost of the program.

## **2.2. EQUIPMENT**

A first step in the resuscitation of the Departments of Archaeology and Cuneiform Studies in Baghdad and Mosul will involve a rehabilitation of their spaces, the provision of computers, communication equipment, teaching aids and research labs. Each faculty member should be provided with a computer that is connected to the internet, a scanner and access to a printer and each institution should have computer labs for the senior students—also connected to the internet. In addition, we should provide the departments with laptop computers and digital projectors for instruction, and a lab with microscopes, scales, and storage facilities.

## **2.3. INSTRUCTION IN IRAQ**

*Aim: To update our Iraqi colleagues who have had difficulty in maintaining contact with developments in the outside world in the past decade. Short Term Goals: To update our Iraqi colleagues on research and approaches that have been developed outside Iraq over the past 15 years.*

Elizabeth Stone and Paul Zimansky will spend 13 weeks in Iraq in 2004, Zainab Bahrani, Marc Van De Mierop and Jeremy Black 6 weeks each, conducting workshops with faculty at Baghdad, Mosul and other Iraqi Universities on recent advances in Mesopotamian archaeology, in Ancient History, in Assyriology and in Museology and Art. These will be intensive 6-week workshops offered to faculty so that they will be able to catch up with changes in the field since 1990. They will be modeled in part on NEH summer institutes (designed to upgrade the quality of college teaching in the US), a program in

which Paul Zimansky has been a faculty member. They will be held first at Baghdad University and later at Mosul University but will be open to faculty from other Iraqi Universities and to senior members of the Department of Antiquities. We will hire English-Arabic translators so that these workshops are available for faculty no matter the quality of their English. Those who are not based in the location where they are offered will be provided with a travel and housing allowance, as well as an extra allowance for the expenses involved for being away from home (Faculty salaries have often been so low that they have had to take second jobs to make ends meet). We expect faculty members to attend two workshops at a time and to be released from much of their other duties during the time of the courses and we will therefore pay all or part of their salaries during that period. The workshops will be scheduled in such a way as to allow the faculty—even those who do not live in the city where the workshops are being held—to continue to provide some instruction at their own universities.

Faculty involved in these programs will also be provided with travel, living allowances and registration fees to allow the archaeologists to attend the 2004 International Conference on the Archaeology of the Ancient Near East in Berlin and the Assyriologists to attend the 2004 meeting of the Rencontre Assyriologique International in South Africa.

*Long Term Goals: To foster close relations between Iraqi archaeologists and Assyriologists with their colleagues in the west, and to develop strong research programs in Iraqi Universities.*

Should the grant be renewed, Elizabeth Stone, Paul Zimansky, Zainab Bahrani and Marc Van De Mierop will return to Iraq for two weeks in January of 2005 and 2006 to consult with their Iraqi colleagues on research endeavors. We would also continue to support Iraqi faculty and advanced students so that they can attend the International Conference on the Archaeology of the Ancient Near East or the Rencontre Assyriologique International in 2005 and 2006.

### **2.3.1. Workshops to be offered**

The following workshops will be offered in the first 6-week session, held in Baghdad:

*Assyriology: Recent work in literature and religion, led by Dr. Jeremy Black*

Tools: Copies of web-based and electronic data on Mesopotamian literature and religion which can be loaded onto the departmental server.

Training: In recent years, major developments have occurred in the availability of ancient Sumerian and Akkadian literature, as well as in tools for our understanding of the languages such as both web-based /DVD materials and sources such as the Concise Dictionary of Akkadian. This workshop will introduce participants to the new material through basic, traditional-style text-reading classes, as well as demonstrating the use of the new tools. The outcome would also be to refresh their familiarity with this enormous ancient heritage and to revive skills which they may not have had the opportunity to exercise.

*Museology and Art, led by Dr. Zainab Bahrani*

Tools: Provision of detailed notes and digitized slides for the participants.

Training: This workshop will review the newest developments in the study of the ancient art of Iraq. In the last decade these have become more integrated into the developments of art history in general, from a style and iconography approach, to one that includes the social and intellectual background of the creators and patrons of the art. Her review sessions will include a special section to discuss developments in museography, that is the preservation and exhibition of objects.

*History and Culture of Greater Mesopotamia in Early Historic Periods I, led by Paul Zimansky*

Tools: Detailed notes will be provided to the participants, and digitized slides illustrating the archaeological record will be provided on CDs.

Training: This workshop will present an overview of cultural developments in the period from the introduction of writing to the middle of the Second Millennium B.C. It will relate materials from Iraq to recent archaeological and textual discoveries in Syria, Turkey, Iran, and the southern Levant, of which scholars in Iraq have received little direct information in recent years. The emphasis will be on issues currently being investigated such as the nature of ancient trade and economic systems, rather than a strict chronological presentation. The central focus will be on southern Mesopotamia.

*New Theoretical and Methodological Approaches in Archaeology, led by Dr. Elizabeth Stone.*

Tools: Detailed notes will be provided to the participants, and digitized slides illustrating the archaeological record will be provided on CDs.

Training: The past 13 years have witnessed major changes in both the conceptualization of research problems in archaeology, especially with the new emphasis on meaning, and in the methods that can be brought to bear. The first half of this workshop will review these changes and provide examples of ways in which the new techniques have been used. In the second half of the workshop these themes will be explored by an examination of Mesopotamia's role in the Neolithic and Chalcolithic periods within the broader framework of Near Eastern Archaeology. The following workshops will be offered in the second 6-week session to be held in Mosul:

*Assyriology: Economy and History, led by Dr. Marc Van De Mierop*

Tools: Detailed notes will be provided to the participants.

Training: This workshop will review developments in the study of ancient textual documentation of Iraq with especial emphasis on historical research. This includes topics such as the development of early cuneiform writing systems, textual criticism in historical reconstructions, and advances in the teaching of languages written in cuneiform.

*History and Culture of Greater Mesopotamia in Early Historic Periods II, , led by Dr. Paul Zimansky*

Tools: Detailed notes will be provided to the participants, and digitized slides illustrating the archaeological record will be provided on CDs.

Training: This workshop follows upon Early Historic Periods I, covering the period from the mid Second Millennium B.C. to the Hellenistic era. The center of gravity shifts from southern Mesopotamia to Assyria, and the key issue is the development and maintenance of imperial systems in southwest Asia. The impact of the Neo-Assyrian and Neo-Babylonian empires on surrounding lands will be explored in detail. As in the previous workshop, the objective is to bring Iraqi scholars up to date on the relationship between Mesopotamian materials and the work that has been done elsewhere in the Near East in recent years.

*Research Design in Greater Mesopotamian Archaeology, led by Dr. Elizabeth Stone*

Tools: Detailed notes and digitized slides will be provided to the participants.

Training: This workshop will examine a number of topics in Near Eastern archaeology-- including the origins of agriculture, the origins of complex society, the Uruk expansion, urbanism, and the structure of Mesopotamian society--and analyze the integration of theoretical approaches and archaeological research through the detailed examination of specific projects, all of which have been published over the past fifteen years.

## **2.4. INSTRUCTION IN THE US**

Five to six of the best graduates of the Department of Archaeology, some of whom may be current employees of the Department of Antiquities, will be invited to Stony Brook. These students will spend the Spring and summer of 2004 in intensive English classes, including reading recent books in English on Mesopotamian archaeology and discussing their readings with our faculty. They will also begin training

in basic computer operations and statistics. This will allow them to gain a good command of English, the more specialized archaeological vocabulary and basic computer skills. The aim of this course is to provide them with the skills which will allow them to enter the MA or PhD program of their choice within the English-speaking world.

If the grant is renewed these students would then be provided with an intensive MA program in Mesopotamian and Near Eastern Archaeology, returning to Iraq after spending two and a half years at Stony Brook. If not, they will have the skills to apply to programs at Stony Brook and elsewhere for advanced training.

## **2.5. CONFERENCES IN IRAQ AND STONY BROOK**

*Aim: To provide advanced Iraqi students in archaeology and Assyriology with experience of conducting modern research and presenting it in an international, but not too intimidating, setting. This would only be possible if the grant were extended beyond the first year.*

We would also set up an program where advanced students from Stony Brook and Columbia Universities develop research papers on a specific theme and present them at a conference to be held in Baghdad for one week in late November 2005 and 2006 (Thanksgiving Week). They would be accompanied by Professors Stone, Zimansky, Bahrani and Van De Mieroop. Iraqi students—generally those who have already participated in the intensive English program (see section 4) would then develop a similar set of research papers and travel to Stony Brook in late May, together with their professors, to attend a conference there. This program is modeled on a similar exchange program between Ege University (Ismir, Turkey) and the Frei Universität in Berlin, in which Zimansky and Stone were participants in 2002 as a result of their joint fieldwork with an Ege University team.

## **2.6. FIELD SCHOOL IN IRAQ**

*Aim: to provide Iraqi students in archaeology with experience in modern approaches to field research.*

When we were at Baghdad University, Dr. Muhammed Taha, noting our shared interest in the Old Babylonian period, suggested that perhaps we could conduct joint research. This joint research would best serve the mission of this proposal if it came in the form of an archaeological field school. Basic to any archaeological research are the methods and procedures of excavation and survey. If the grant is extended beyond the first year, we propose to conduct a field school with 10 US students, mostly senior undergraduate or beginning graduate students from Stony Brook, and 10 Iraqi students drawn from the Baghdad and Mosul programs. We would plan to conduct intrasite archaeological survey at Tell Dahailia for 6 weeks, followed by a two month excavation season at Tell Abu Duwari, ancient Mashkan-shapir. The instructors for the program would consist of Drs. Stone, Zimansky and Dr. Muhammed Taha.

## **2.7. LONG TERM GOALS**

Our hope is that the ties that we develop during the course of this project will continue long after the termination of the grant. We anticipate conducting joint research projects in Iraq, working with Iraqi students in the field, and continuing exchange programs between the Universities. It is in this way that Iraqi Universities can take advantage of their very well trained faculty and get caught up with developments that have taken place elsewhere over the past 13 years.

### 3. Challenge 2: Environmental Health

The environment is one of the major determinants of human health and well being. As described in the next section, Iraq is currently facing acute as well as chronic environmental health problems. Given their complexity and magnitude, it is crucial to develop strong, multidisciplinary environmental health training and research programs in Iraq and provide tools to assess the environment problems, develop solutions, and analyze and prevent related health problems. *The long-term goal of the proposed program is to develop training and research programs in the area of environmental health. The short-term goal of this program is to provide tools and training for Iraqi faculty and academic leaders so they will be able to develop training and research programs in this area. As part of this program, two self-contained environmental research laboratories will be delivered in the first year. These facilities will enable Iraqi faculty to play a role in addressing the need for safe drinking water and other environmental problems. As noted during a June 10th USAID webcast, the most severe environmental problems are encountered in Basra and Baghdad. Hence, the environmental research laboratories will be deployed at Basra University and Baghdad University first and only later in Mosul.*

#### 3.1. OVERVIEW OF IRAQ'S GEOGRAPHY AND ENVIRONMENTAL PROBLEMS

Iraq (Mesopotamia) is a large country — comparable in size to California — divided in 19 provinces. The population, estimated at 25 million, resides predominantly in three regions. Basra is the principal city in the southern region. It is Iraq's only seaport, is rich in oil and many heavy industries are located in and around the city. The middle region is centered around Baghdad, the capital, and has the highest population density. Most of the recently built chemical and biological industries are located in Baghdad, the surrounding areas, and especially in the south central region. Mosul is the largest city in the northern region, which is rich in oil and is the site for many petrochemical operations. Mosul and its surrounding areas are rich in sulfur, which has been extracted, processed and used in various industries, with some exported.

The economy of the country is built on the oil. Iraq has 10% of the world oil reserve, second only to Saudi Arabia. The nationalization of the oil industry in 1972 generated a large amount of wealth, which was used to support the military structure, industry, agriculture, and to a lesser extent, transportation, housing, education and health. Prior to the Gulf War, Iraq had evolved from a typical third world under-developed country to an industrial, prosperous country with a modern social infrastructure and adequate public services. An important socio economic index, the infant mortality rate fell to 65/1000 in the years before the Gulf war, better than the average in the developing countries of 76/1000. Due to the war with Iran and the war with Kuwait, Iraq lost most of its wealth and the infrastructure began to deteriorate. The Embargo as well as the focus on rebuilding the military structure accelerated the decline in infrastructure, including sewage treatment plants and water purification installations. During this period, the Iraqi educational system and health systems declined. Universities had to function with very basic resources and were isolated from the rapidly developing medical technology, revolution in information and communication technology, as well as teaching methods. Iraq's health system previously described by WHO as a first class system, declined severely. The wide spread looting at the end of the present conflict stripped many health facilities even from the most basic equipment.

##### 3.1.1. Environmental Problems in Iraq

Iraq has many public health problems caused by environmental pollution. In the southern region water contamination with pesticides used to eradicate mosquitoes and waterborne disease has contaminated the water in major cities as well as rural areas. After the first Gulf war the Hussein regime accelerate a plan to redirect water from the marshes in the South. This action has left high concentrations of pesticides and other pollutants in soil and ground water. Throughout the country huge industrial complexes were built

without any real consideration of waste management and environment impact. The petrochemical complexes, along with the burning of chemicals and natural gas, have polluted the air and created many sites of chronic soil contamination. The regime also built up an infrastructure to produce weapons. As part of this effort thousands of chemical industries ranging from small private shops to huge government research and manufacturing enterprises were created, many of these were located close to the rivers because of the need for energy and easy transport. The complete lack of environmental protection over the last few decades has resulted in severe contamination around the petrochemical, chemical, and military complexes. Contamination of soils and water with solvents, petrochemical compounds, and metals (e.g., mercury, arsenic and lead) are common. In addition, the lack of sewage treatment has caused acute environmental problems. A recent CSPAN TV report (Tour on Iraq with Andrew S. Natsios, USAID Administrator; 6/19/03) reported that many wastewater treatment plants in the country were completely non-functional. As a result, wastewater was diverted to bypass these plants and discharged untreated into the natural water system, the rivers, a process witnessed by Stone, Zimansky and Bahrani in June 2003. The poor water quality resulting from this sewage discharge has placed a severe burden on drinking water treatment plants, which were already hampered by maintenance problems as well as restrictions placed on the use of basic water purification chemicals. Most notable was the ban on the acquisition of chlorine under the UN embargo.

The wars have also contributed to the environmental problems in Iraq. Damaged plants spilled chemicals into the soil, water, and air; sunken ships and military equipment contaminated the water; and radioactive material polluted all battle targets, cities and surrounding areas. Chemical, biological and possibly nuclear factories were destroyed or badly damaged releasing poisonous toxins into the environment. A UN mission in 1991 found 650 out of 1330 active oil wells were burning, releasing smoke that spread many miles inside Iraq and into neighboring countries. Wells released millions of barrels of crude oil. The oil went into the sea and the soil, contaminating ground water, and released toxins in the air through evaporation. In the north, a recent fire in one of the major sulfur processing plants took more than three weeks to control and caused wide spread air pollution (Azzman News Paper, #1561, 7/20/2003). An estimated 1,500,000 tons of sulfur burned causing at least five deaths and leaving many people with respiratory and other acute illnesses.

### **3.1.2. Impact of Environmental Problems on Public Health**

The military conflicts, UN embargo, lack of environmental protection under the previous regime, and poor condition of basic services, such as health services, sanitation, and water treatment, has led to an increase in mortality and morbidity from malnourishment, infectious diseases and the many other conditions normally associated with a failing public health system. Although all segments of the population have been affected by this, is especially the health of children that has declined. There have been a number of studies that directly link the adverse health effects to specific environmental problems. For example, studies have linked increased incidence and death from cancer to the increase in exposure to radioactive material and chemicals associated with the Gulf War. These conditions have also increased the number of adverse reproductive outcomes including miscarriages and congenital malformation, resulting in a major public health problem challenging the entire medical system. Infectious and diarrhea disease resulting from water contamination have contributed significantly to the range of diseases affecting the population and increased mortality among all age groups. Studies focusing on respiratory illness have shown a significant increase in the prevalence of acute and chronic respiratory illnesses such as asthma and bronchitis, the bulk of which can be ascribed to air pollution. In the post-Gulf War period, infant mortality rate rose to 103/1000 due to the severe health deterioration in the country in the 1990's. Under-five mortality rates in Iraq now are the worst in the world. Unicef reports that Iraq ranks 126th out of 174 on the list of UN Human Development Index, while it ranked 50th out of 130 on the list in 1990 (Unicef 2002).



### **3.2. STATUS OF ENVIRONMENTAL HEALTH TRAINING AND RESEARCH IN IRAQ**

It is important to note that training health care professionals in environmental health is often deficient even in well-developed countries. A report by the US Institute of Medicine, IOM, indicated that environmental health training in US medical schools is very limited (IOM 1988). The report examined the need for training in the field of environmental health in the US and called for enhanced physician training and education in this area. A 1985 survey showed that only 50% of US medical schools included 4 hours or less per 4 years of environmental health in their curricula (Levy 1985). However, environmental health is now a growing field and training in this area of specialty is especially critical to Iraq given its many acute and chronic environmental problems. In the section below, the status of training in this field of specialty at Iraqi Universities and the Ministry of Health are briefly summarized.

#### **3.2.1. UNIVERSITIES**

The Iraqi educational system as a whole has suffered from a lack of resources caused by the wars, policies of the previous regime, and the embargo. Universities operated with minimal resources, were isolated from the international community, and had to concentrate on priorities set by the regime. Public health, environmental problems and related health issues were never among these priorities. Faculty training, which often used to include training at Western medical schools, declined. Communication and information technology facilities were not available, very restricted and often monitored. Access to books and literature was limited. In addition, low salaries have led many health professionals, including physicians, to seek other means of support, often resulting in them leaving medicine altogether. Most medical faculty had to supplement their income by opening private practices or being engaged in some other second jobs. Under these circumstances, M.D.'s did not have the time or resources to improve their teaching capabilities, research and involvement in public health. More than anything else, it was research in this area which suffered. In summary, very few faculty members remain in the field of public health and even fewer have been active in the field of environmental health.

#### **3.2.2. Environmental Health Services, Ministry of Health**

There has been very little focus on environmentally related health issues by the Ministry of Health, the provider of health services in the country, even as public health and environmental health problems overwhelmed the available resources and health services. Lack of enough trained personnel who have the experience and knowledge to deal with environmental problems is a major contributing factor. In order to deal with these difficulties, the Department of Human Environment was restructured as a Directorate General under Law # 85 (implemented in the late 1990s) and was connected with the Environmental Protection Council headed by the Minister of Health. Nevertheless, this unit was never effective due to a lack of resources, trained personnel, and an adequate budget. Tools and equipment for sampling and testing were poor and lacked parts and maintenance. Access to information and scientific support has been deficient, and the number of physicians and hygienists involved was very small.

The training of support staff and technicians has been focused on other health priorities. Only 10% or less of those attending the Ministry of Health Training Institute of Allied Health Professionals were trained as public health (preventive) assistants and these received very little training in environmental health. Laboratory assistants were trained mostly to work in biological labs and to carry out traditional labs functions. Importantly, access to sites for environmental surveillance and testing was restricted in most locations due to the secrecy of the work being conducted, such that when a contaminated site was identified, remedial interventions were prevented or delayed due to the need for the site to continue operations, most of which were military in nature. One such case was brought to our attention during discussions with Dr. Marqus, then Deputy Minister of Health in Iraq. When high levels of heavy metals and metalloids were found in a sample of a river sediment, his department was not granted access to

industrial complexes upstream of the sample location to determine the source or sources of the contamination. Environmental stewardship and possible associated health problems were of no concern to the military leadership in their quest to (re)build their military power.

### **3.3. SCOPE AND STRATEGY OF PROPOSED ENVIRONMENTAL HEALTH INITIATIVE**

Health education, even in the well-developed part of the world, has traditionally focused on individual patients. By contrast analysis and prevention of public health problems related to environmental problems requires an approach in which the health of the population as a whole is the focus. Training in environmental health provides medical professionals with the knowledge and skills they need to deal effectively with environmental health issues in the public health context. Training in environmental health requires not only training in medical aspects of the problem but also requires a basic knowledge of environmental science. Stony Brook is ideally positioned to take on a program to develop strong environmental health training and research programs in Iraq. Stony Brook's Division of Environmental Medicine and Occupational Health, provides an existing academic program that provides the framework for training Iraqi MD's and faculty. SBU's academic program in Environmental Medicine is complemented by several strong research and training programs in environmental science. Most prominent is the fact that SBU is one of only four US academic institutions with a Center for Environmental Molecular Science (CEMS). This Center, funded by NSF and DOE, is directed by Dr. Richard Reeder. In addition, SBU's Groundwater Research Institute and Department of Geosciences provide training programs and research in environmental geosciences with an emphasis on hydrogeology and water quality. Some aspects of these programs will be integrated into the proposed training programs for Iraqi medical faculty.

As is evident from the brief summary of Iraq's environmental problems and related public health problems, there is a great need for medical professionals trained in environmental health. To address this need, we propose to enable Iraqi universities to build up a modern training and research program in environmental health. We propose to establish three training and research centers in environmental health, one on the Baghdad area (most likely at Al Mustansiriyah, but with the expectation that Baghdad U. Faculty can also make use of the facilities), one at Basra University and one at Mosul University. We have the endorsement of the Dean of Al Mustansiriyah, and a positive email from the Dean of Baghdad U (on file). In addition, we had made contact with the new Dean at Basra, but we lost contact when he was kidnapped.

The creation of the three centers is a considerable investment in people and infrastructure. For each of these centers we plan to hire an Iraqi Center leader/coordinator and an Iraqi support staff (environmental hygienist, an analytical chemist or geochemist as laboratory supervisor, a field vehicle operator, and a secretary). The goal is to organize and train a core group of faculty at each Center that will be involved in training and research. The core faculty group is expected include a Biostatistician/Epidemiologist and M.D.'s with expertise in Public or Community Health and an interest in Environmental Health. Through training under this program, these medical faculty will become environmental health specialists and the instructors for other Iraqi M.D.s after the proposed USAID program terminates. Inclusion of a Biostatistician and Epidemiologist is of importance for planning and implementation of field studies and sampling programs. The infrastructure of each Center will include modern teaching equipment, a core collection of library materials, internet-enabled computers for faculty, access to interlibrary loan via SBU (see section 4), and environmental analyses equipment. It is our expectation that these three training and research centers will also be an important resource to the new government, community and other organizations (mostly NGOs) working on environmental problems and associated health issues. In essence, we are envisioning these centers to function as independent academic research and training centers, similar to the role many academic environmental science programs play in the US.

The Centers are located at three different institutions and they will also function as training Centers for medical professionals associated with other Iraqi academic institutions as well as governmental departments. This is accomplished by organizing workshops with US and Iraqi instructors that are open to faculty from other institutions. A mini-grant system to seed small projects among Iraqi universities or between Iraqi and SBU scientists is also open to faculty from other institutions. A small national coordinating office will be established to organize the workshops, coordinate activities among the three Centers, and raise awareness of the Centers among government agencies and other academic institutions. This office can be located at one of the three sites. This office will also be responsible for paying the Iraqi employees supported by this project, property control, disbursement of mini grants and other miscellaneous tasks. The Iraqi national office will be the main interface between the three Centers and the US personnel associated with Challenge 2. The US staff will consist of a Challenge Director (Wajdy Hailoo), Challenge Coordinator (possibly Shawky Marqus, M.D.; CV on file), a bilingual education specialist in charge of organizing educational activities (possibly Iraqi-born Dr. Muna Al Khalidi; CV on file), and a bilingual secretary.

To ensure that the project is advocated by the Iraqi University leadership, we proposed to meet with the Deans of the four institutions involved immediately after the USAID award has been established. Given that we have already established contacts with two of the three Deans and have secured letters of endorsement by two institutions, we can immediately focus on discussion related to the proposed work plan detailed in the next section. Following our visit to Iraq and pending approval of the workplan by USAID, we propose to invite the Deans of the four institutions involved as well as the three Center leaders to participate in a workshop at SBU. In addition we will train the Iraqi laboratory operators (3) and environmental hygienists (3) at SBU during the first six months. In years two and three, up to ten Iraqi faculty members each year will be trained at SBU for a period of six months. Existing curricula in environmental medicine as well as environmental science will be leveraged to deliver this training.

The continued involvement of the Iraqi Deans during the three-year project will be encouraged through their appointment to an Advisory Committee that will be chaired by Iraq-born Dr. Yacov Shamash, Dean of Engineering and Applied Science at SBU. Other members of the Advisory committee include: Richard Reeder, Director of the Center for Environmental Science at SBU; Dr. Lung Chi Chen, Professor, Department of Environmental Medicine, New York University, the program leadership in the US and Iraq, as well as representatives from the Iraqi American professional community (International Society of Iraqi Scientists) and American environmental research and education communities. The program will seek assistance from 2-3 program consultants including Dr. Phillip Landrigan, a well-known scientist and leader in the field of public and environmental health. We also expect to appoint a USAID official to the committee. The Advisory committee will meet on a regular basis to review the project, provide guidance to the Challenge Director Wajdy Hailoo and his staff, as well as to review mini-grant applications. Short detailed descriptions of each of the component of the proposed challenge is given in the next section.

### **3.4 DETAILED WORK PLAN**

#### **3.4.1. Workshops for Deans and Iraqi Center Staff within first 3 months of award**

The goal of this one-time workshop immediately following the approval of the workplan is to bring the Deans and Center Leaders up to speed on basic concepts in the relatively new field of environmental health and environmental science, as well as to provide a forum for a general discussion on the implementation of the USAID-approved workplan. The Deans, many very recently appointed, will also be presented with opportunities to meet the academic leadership at SBU to discuss leadership challenges and opportunities. The Deans will visit for ten days. The Center Leaders and Hygienists visit for up to one month. They will receive additional in-depth training, visits to environmental laboratories, visits to environmental health program clinics, and discussions with the US team regarding the implementations

and expectations of the program. The laboratory supervisors’ training consists of a combination of USB-based training as well as training by the vendors of the analytical equipment that will be installed at the three Centers.

**3.4.2. Training of Environmental Health Specialists in Iraq and US**

This component of the proposed training program targets medical faculty at the three Centers. In the first year the US staff will organize and conduct a training course in Iraq, equivalent to six US credits. The training course will be in the form of an intensive 20hrs/week course for two weeks. The participants, a maximum of 4 per center, will receive a participation stipend to offset any lost wages and a travel allowance for those that need to travel to the site of the training course. This first course will prepare MD’s for a 4 month curriculum in the US. We plan to offer this in-depth training, equivalent to US graduate 24 credits, over a period of 4 months starting in year two of the award. The participants will receive travel support, a location stipend, book allowance, and a participation stipend to offset lost wages in Iraq. In the first year of the award, Dr. Hailoo will seek to gain official recognition for the proposed curriculum in the form of an Advanced Graduate Certificate Program. The proposed training program will emphasize environmental health, but also include basic training in environmental science. The proposed training program will leverage the existing Certificate Program in Environmental Health and Safety, Directed by Wajdy Hailoo, as well as existing environmental science courses in Geosciences and Hydrogeology taught by Drs. Schoonen, Bokuniewicz, and Reeder. The short term goal of the proposed training is to increase the knowledge and experience in the field of environmental health, while the long term goal is to prepare the faculty to expand the program and train the next generation, establish on going research programs, and act as a specialized core for other agencies in need for experts support in the field of environmental health.

**3.4.3. Deliver Prefabricated Environmental Laboratories and Field Vehicles**

In order to develop a meaningful training and research program in environmental health, it is necessary to provide each of the three centers with analytical tools. Given the uncertainty in the state of the infrastructure at the three participating universities, pre-fabricated, self-contained laboratories equipped with analytical tools for routine analyses of drinking water, waste water, soils, solid waste, and aerosols will be delivered in the first year. The labs, powered by a generator, can operate independent of the power grid. Funds are also requested to rehab laboratory space at these two institutions that can house the testing equipment by the end of the grant. These environmental laboratories will be equipped with standard, relatively simple to operate equipment. A field vehicle will be associated with each of the three environmental laboratories. These vehicles will be equipped with standard field sampling and analysis equipment, see Table 1. The combination of the stationary laboratory and field vehicle enables Iraqi scientists to conduct field-based environmental assessment combined with laboratory-based analysis. The laboratories will have access to the GIS system that will be deployed as part of this program. Dr. Martin Schoonen will coordinate this component of the project. As summarized in his brief CV, Schoonen has considerable experience in environmental analyses, use of field sampling techniques, and development of analytical methods.

<b>TABLE 1. ENVIRONMENTAL SCIENCE LABORATORY EQUIPMENT 1</b>	
<i><b>Instrument</b></i>	<b>Use</b>
Ion Chromatograph with autosampler	Routine anion and cation analyses in water and wastewater
Table top X-Ray Fluorescence	Chemical analyses of soils, air filters for major and minor elements between Na and U.
Tabletop X-Ray Diffraction	Routine mineralogical analysis of soils, rock and

	solid waste.
Gas Chromatograph with TCD, FID detectors, columns and autosampler	Routine analyses of organic volatiles in air and water samples
Equipment for Total Colliform determinations	Standard water-quality test for bacterial contamination. Microscope and incubator
Standard small equipment and supplies, refrigerators, lab benches, hood	Handling and storage of samples. Balances, pH meter, reagents, and He gas.
Field equipment and 4WD vehicle	Sampling and in situ/on site measurements and sample preparation in field.
Handheld XRF environmental analyzer	Chemical analyses of soils, air filters for major and minor elements between Na and U. Can be used in field and lab.
GPS	Global positioning device
Laptop with GIS software	Information technology tool to link spatially distributed data

1 All three centers will be provided with identical laboratories.

The prefabricated laboratories will be constructed, outfitted and shipped by the Syracuse, NY, office of CDM. The Syracuse, NY, office is one of CDM’s 118 offices worldwide. Founded in 1947, CDM, ([www.cdm.com](http://www.cdm.com)), is a global consulting, engineering, construction and operations firm headquartered in Cambridge, Massachusetts, USA. The company maintains branch, project and affiliate offices in the Americas, Asia, Europe and the Middle East -- including Amman, Jordan; Kuwait City, Kuwait; Cairo, Egypt; and, Al-Ram, West Bank. This employee-owned 3,630-person organization ranks among the premier firms improving environment, health and infrastructure in partnership with public and private clients worldwide, successfully completing projects in 135 countries. In 2002, client revenues totaled \$597 million. CDM clients include bilateral development agencies (including USAID), international financing institutions, nongovernmental organizations (NGOs), government ministries and municipalities, industries and others. CDM has been a trusted partner in the Middle East for three decades, delivering assistance for USAID in conflict, post-conflict and long-term development settings in Central Asia, the Balkans and Middle East - including northern Iraq and eastern Turkey after the 1991 Gulf War, when USAID directed CDM to deploy water and sanitation specialists to help Kurdish refugees as part of Operation Provide Comfort. In Iraq, with a staff based in Baghdad, CDM is responsible for leading environment and infrastructure activities on the USAID Iraq Community Action Program (CAP) under the overall leadership of International Relief and Development, Inc. (IRD). CDM has in-house design and fabrication capability at several locations in the US. The fabrication shops are part of CDM’s integrated construction service offerings to clients nationwide. In addition to environmental and infrastructure equipment fabrication, CDM routinely fabricates pilot plant assemblies for water and wastewater process technology testing and documentation. CDM recently completed the design, fabrication, start-up, and field-testing of a mobile water treatment pilot plant facility for the Alexandria Egypt Water General Authority. The trailer-mounted unit was fabricated and tested in the US and shipped to Egypt for start-up and training.

**3.4.4. Support for Conferences**

One of the consequences of the previous regime has been the nearly complete isolation of University faculty from their peers in other countries. We propose to address this problem by encouraging Deans to participate in international conferences on Environmental Health and requiring the participation of Center

Leaders in such conferences. To make this possible we request sufficient funds for travel to one conference per year for each Dean and Center Leader. While this strategy reconnects some of the faculty to the international community, it is clear that this strategy does not reach many. To foster interaction between Iraqi faculty and US colleagues, we propose to also organize an Environmental Health Conference in Iraq starting in year 2. These conferences will bring together US and Iraqi scientists in Iraq. These conferences may also stimulate collaborations among Iraqi scientists from different institutions or disciplines. Iraqi scientists can apply for travel support to attend the conference. We have budgeted for five non-Iraqi scientists to attend these yearly conferences. These scientists are expected to present plenary lectures that benefit their Iraqi colleagues. In our budget we have assumed that these five scientists will be US-based.

**3.4.5. Mini Grants**

Mini Grants will be awarded on a competitive basis. The goal of these mini grants is to initiate research in Environmental Health and Environmental Science, foster SBU-Iraqi collaborations, strengthen educational resources in this field in Iraq, and promote Environmental Health/Science as a field of study among students. Short descriptions of the types of activities that will be supported, the level of support, and the expected number of awards are given in Table 2.

Subject	Proposed level of Support(k\$)/award	Expected number of awards
Seed grants to support environmental health or environmental science research and publishing by Iraqi faculty	Up to 5k	4
Translate text book into Arabic language or other activity that strengthens education in environmental health/science in Iraq	Up to 2k	6
Collaborative research with SBU faculty involving travel to SBU to conduct part of research project	Up to 8k	2
Travel support to attend international conference in environmental health/sciences for presentation of research papers	Up to 3k	3

The National Office in Iraq will handle the application process and forward valid applications to the Advisory Committee for review. The Advisory Board will make the funding decisions and the Iraqi National office will handle the award. A total of 63k is requested to support this component of the initiative. This program will start in year 2 and continue in year 3. The expectation is that mini grants

will seed long term research projects. Some of these projects will involve collaborations with SBU faculty.

#### **4. Information and Communication Tools**

##### **4.1. INTRODUCTION**

One of the areas where the Iraqi Universities have fallen behind most is informatics. The information revolution that swept institutions of higher learning around the world over the past decade has largely bypassed Iraq as a result of the economic embargo and restrictions on information flow imposed by the Ba'ath government. Access to computers was limited, networking almost unheard of, and remote access virtually impossible. Training in English, the language of the web, was reduced as many of those with foreign degrees—and thus the best language skills—left the country. We hope to redress these problems for the programs that we are targeting, Archaeology and Assyriology, and Environmental Health/Science. A critical component of the infrastructure is telephone and internet connections for our Iraqi partners. We have obtained a quote from Neareast Resources, a US-Iraq communication corporation, with offices in Chicago and Iraq for the installation of telephone and internet access ([www.neareastresources.com](http://www.neareastresources.com)). We propose to install a satellite-based system at the Archeology Department at Baghdad University to serve both their faculty and a computer and GIS laboratory that we propose to establish. The three environmental health sites and the national office will be served by a microwave-based option also provided by Neareast Resources. Both systems provide telephone as well as internet access, which is crucial to enable our partners to access web-based resources and connect to their US colleagues. Neareast Resources can provide this service within 21 to 30 days after the service order has been placed. We anticipate that these systems will be ordered and installed within the first six months of the award.

##### **4.2. COMPUTERIZATION**

*Aim: To provide the hardware, software and training for archaeologists and Assyriologists and Environmental Health faculty to use modern computer tools in research and education.*

*Short Term Goals: To provide faculty in Archaeology and Assyriology and Environmental Health at Baghdad, Mosul and Basra Universities with the equipment and training necessary to bring them up to date.*

Provision of desk-top computers equipped with Microsoft Office in Arabic to 60 faculties in Archaeology, Cuneiform Studies and Environmental Health. Basic training in Microsoft Office (Arabic version) will be offered, together with instruction on the ways in which these tools are used today in archaeology and Assyriology and in Environmental Health. PC Labs will also be provided for students in Archeology that they have similar access to modern communications. The student labs will also serve as teaching labs (see 4.6). To oversee the acquisition of the computer hardware and install the student labs support is requested for one SBU IT position and one Iraqi IT position per lab.

*Long Term Goals: This goal should be accomplished by the end of the first year.*

##### **4.3. TEACHING AND RESEARCH LABS**

The looting of Iraqi Universities has left them without adequate tools for instruction. This proposal will equip the Archaeology and Environmental Health Departments at Baghdad, Mosul and Basra Universities with good, modern, teaching labs equipped with audiovisual teaching materials, and microscopes, balances and storage facilities for artifacts in the case of the archaeology labs.

#### 4.4. REMOTE SENSING AND GIS

*Aim:* To provide archaeologists, environmental scientists and other members of the University with access to modern means of analyzing spatial data.

*Short Term Goals:* To set up Remote Sensing and GIS Labs at Mosul and Baghdad Universities and to provide training to faculty.

Both Mosul and Baghdad Universities had centers of Remote Sensing before 1990, but these have stagnated during the decade and a half which have seen these tools, especially when combined with GIS, sweep all fields where geographical data are relevant. These are important tools in both archaeology and environmental health, but they will not be implemented effectively until the faculty have become comfortable with the use of computers and the access to information of all kinds that is available through the web. Under these circumstances, if the grant is extended to a third year, we propose to reequip the Mosul and Baghdad University centers of remote sensing, providing each University with a 20-seat teaching lab, equipped with high end desk-top PCs, a server and local network, both color printer and poster printers, a large format scanner, a high resolution scanner and a data projector. The servers will be configured so that they can be managed by the SBU IT person. Iraqi IT staff will be responsible for day-to-day operation and back up of data. The SBU IT will function as a resource to them. The computers will be loaded with ESRI ArcGIS and Erdas Imagine software and recent multispectral satellite imagery of all of Iraq. The primary data set will be public domain 15 meter resolution Aster Terra data, but mid 1990s SPOT data (also available free of charge), as well as earlier SPOT data and late 1960s Corona data will also be provided. We will not purchase TM data since it tends to be over-saturated in desert environments such as Iraq's. The Aster data will provide an up-to-date picture of the Iraqi infrastructure and countryside, while the earlier imagery can be used to record recent trends in settlement and agricultural expansion which might be correlated with data on public health. The 1960s Corona data are especially useful for archaeologists since they are both of very high resolution (2 m) and precede much modern development thus preserving elements of the ancient landscape no longer visible today. Elizabeth Stone will offer an intensive 6-week training program in remote sensing and GIS at Baghdad University early in 2006. Participants in the program will be drawn from Basra, Mosul and Baghdad Universities. All participants will be released from their teaching duties and their salaries will be paid by the grant. Those from Mosul and Basra will also receive a travel stipend.

Tools: In addition to the imagery of Iraq, participants will receive detailed notes on both the practical and theoretical aspects of the program.

Training: The areas covered will mirror the course which Dr. Stone has taught successfully to Stony Brook graduate and undergraduate students in Archaeology, Primatology, Ecology and Evolution, Geosciences, Paleontology and (in the near future) Environmental Health. Those attending the class will learn all steps in the analysis of both satellite imagery and GIS by working on one particular geographic area, learning image analysis, classification of imagery, the creation of new GIS files, their analysis and modeling.

Long Term Goals: The efficient use of these tools for research in archaeology, Assyriology and environmental health.

#### 4.5. LIBRARY

Rebuilding and modernizing academic libraries is a key component in creating a viable higher education system. SBU will rebuild the libraries of the participating universities in the areas of archeology and environmental health/science. The strategy is to start with a document delivery and acquisition program to address immediate needs and move to a web-based library.



**Aim 1.** To support archaeological and environmental health teaching and research, SBU will supply those faculties with books and journals they need for current research and teaching.

Short term goals (year 1). 1) SBU will create a document delivery service to provide articles to faculty and graduate students working in archaeology and environmental health/science at participating universities in Iraq (University of Baghdad, Al Mustansiriyah, Basra University, and Mosul University). For the first year or two, this service will run on fax machines connected by U.S.-supported telephone lines. This service is limited to journal articles and copyright limitations. 2) SBU will purchase archaeology and environmental health books published since 1990 which, due to the embargo, are lacking at the participating universities. To support this effort, a library support staff position will be created at SBU. A total of \$300k is requested in year one to support the acquisition of materials (\$100k for acquisition of requested materials not available within the SBU library holdings; \$200k to build a core library of handbooks, text books, and other reference materials at the three Environmental Health Centers).

Long term goal (year 2-3). 1) When Iraq has robust Internet connections, SBU will move the document delivery service to digital delivery over the Internet using ILLiad software hosted on the vendor's server. For each of the centers this will amount to a cost of \$10k/year to cover the ILLiad license fee and client software.

**Aim 2.** To support archaeology and environmental health faculty and students, SBU will develop an electronic library of databases, electronic journals and electronic books. This effort will leverage the investment in computing resources made in year 1 (see 4.2.)

Long term goal (year 2-3). SBU will subscribe on behalf of participating Iraqi universities to a basic set of archaeology and environmental health databases, electronic journals, and electronic books and host access to these resources through an SBU server using existing proxy software. Cost: \$400k/yr for subscriptions to electronic resources and \$150k to install dedicated server equipped with authentication software. To support the development of this web-based library, an Information Technology position

**Aim 3.** To provide a strong historical archaeology collection, SBU will digitize a core collection of out of print books and journals.

Long term goal (year 2-3). UB archaeology library staff will inventory their collection. Prof. Stone and other archaeologists and librarians will match these holdings against the holdings at SBU and Columbia. From this comparison, they will draw up a list of essential historical titles, both journals and monographs. SBU will manage the microfilming, digitizing, and copyright management of approximately 2000 volumes of books and journals that will become the historical part of the archaeology electronic library (1 million total digitizing cost). Depending on copyright clearances, these electronic resources will be available for on-campus use at Columbia, SBU, and Baghdad University and Mosul University. This effort will start in year 2 with the digitizing of materials. The web-based library will be hosted on the dedicated library server for this project and will be accessible in year 3.

#### **4.6. Intensive English Training and Basic Computer Skills**

*Aim: To provide intensive English training to Iraqi University students.*

**Short Term and Long Term Goals:**

English is the language of the information age. Instruction in English has deteriorated significantly over the last few decades as many instructors left the country. The aim of this component of the project is to achieve reasonable fluency in English among students. The program will target specifically Archeology

students. A US program staffer will teach these intensive English courses in Iraq. SBU has considerable experience in teaching English as a second language as many of our students are drawn from families where English is not the native language.

*Aim: To provide training in basic computer skills to Iraqi Archeology students.*

Leveraging the investment in student PC labs (see 4.2), instruction in English will be combined with instruction basic computing skills and the use of standard word processing, spread sheet, and presentation software. The students in archaeology and cuneiform studies who participate in the student conferences, field school, and GIS workshops will be expected to have already completed these two components of the program.

### **Distribution of Reports:**

- a) Reports required as described in this section will be sent to the CTO.
- b) Reports and intellectual products required above will also be submitted in electronic format and hard copy to:

PPC/CDIE/DI,  
Attn. ACQUISITIONS  
1300 Pennsylvania Ave.  
Washington, D.C. 20523  
[docssubmit@dec.cdie.org](mailto:docssubmit@dec.cdie.org)  
<http://www.dec.org>

### **Substantial USAID Involvement**

USAID will be substantially and actively involved during the implementation of the Agreement in the following ways:

- 1) Approval of the recipient's Implementation Plans.

Where the timeline for the planned achievement of milestones/outputs discussed in the Program Description has not been established in sufficient detail when the award is executed, approval of this plan may be provided at a later date. Approval of these Plans must be required no more often than annually; significant changes by the recipient to the approved plan will require additional approval.

- 2) Approval of specified key personnel.

Only those positions which are considered to be essential to the successful implementation of the award shall be designated as Key Personnel. It is USAID policy to limit this to a reasonable number of positions, generally no more than five positions or five percent of recipient employees working under the award, whichever is greater.

- 3) Agency and recipient collaboration or joint participation.

Where there are specific elements in the Program Description for which USAID's technical knowledge would benefit the recipient's successful accomplishment of stated program objectives,

the joint participation of USAID and the recipient can be authorized. Where the Agreement Officer is satisfied that there is sufficient reason for Agency involvement and that involvement is specifically tailored to support identified elements in the Program Description, the following are examples of appropriate levels of substantial involvement:

- a. Collaborative involvement in selection of advisory committee members. USAID may also chose to become a member of this type of committee. Advisory committees shall concern themselves only with technical or programmatic issues and not routine administrative matters;
- b. Concur on the selection of subaward recipients and/or the substantive provisions of the subawards;
- c. Approval of the recipient's monitoring and evaluation plans;
- d. Agency monitoring to permit specified kinds of direction or redirection because of interrelationships with other projects. All such activities must be included in the Program Description and negotiated in the budget of the award.

## **STANDARD PROVISIONS FOR U.S., NONGOVERNMENTAL RECIPIENTS**

### **C.1 APPLICABILITY OF 22 CFR PART 226 (APRIL 1998)**

(a) All provisions of 22 CFR Part 226 and all Standard Provisions attached to this agreement are applicable to the recipient and to subrecipients which meet the definition of "Recipient" in Part 226, unless a section specifically excludes a subrecipient from coverage. The recipient shall assure that subrecipients have copies of all the attached standard provisions.

(b) For any subawards made with entities which fall outside of the definition of "Recipient" (such as Non-US organizations) the Recipient shall include the applicable "Standard Provisions for Non-US Nongovernmental Grantees" except for the "Accounting, Audit and Records" Standard Provision. Recipients are required to ensure compliance with subrecipient monitoring procedures in accordance with OMB Circular A-133 and shall insert an appropriate provision on accounting, audit and records.

### **C.2 INELIGIBLE COUNTRIES (MAY 1986)**

Unless otherwise approved by the USAID Agreement Officer, funds will only be expended for assistance to countries eligible for assistance under the Foreign Assistance Act of 1961, as amended, or under acts appropriating funds for foreign assistance.

### **C.3 NONDISCRIMINATION (MAY 1986)**

No U.S. citizen or legal resident shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity funded by this award on the basis of race, color, national origin, age, handicap, or sex.

### **C.4 INVESTMENT PROMOTION (JANUARY 1994)**

No funds or other support provided hereunder may be used in a project or activity reasonably likely to involve the relocation or expansion outside of the United States of an enterprise located in the United States if non-U.S. production in such relocation or expansion replaces some or all of the production of, and reduces the number of employees at, said enterprise in the United States. No funds or other support provided hereunder may be used in a project or activity the purpose of which is the establishment or development in a foreign country of any export processing zone or designated area where the labor, environmental, tax, tariff, and safety laws of the country would not apply, without the prior written approval of USAID. No funds or other support provided hereunder may be used in a project or activity which contributes to the violation of internationally recognized rights of workers in the recipient country, including those in any designated zone or area in that country.

### **C.5 NONLIABILITY (NOVEMBER 1985)**

USAID does not assume liability for any third party claims for damages arising out of this award.

### **C.6 AMENDMENT (NOVEMBER 1985)**

The award may be amended by formal modifications to the basic award document or by means of an exchange of letters between the Agreement Officer and an appropriate official of the recipient.

**C.7 NOTICES (NOVEMBER 1985)**

Any notice given by USAID or the recipient shall be sufficient only if in writing and delivered in person, mailed, or cabled as follows:

To the USAID Agreement Officer, at the address specified in the award.

To recipient, at recipient's address shown in the award or to such other address designated within the award Notices shall be effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

**C.8 SUBAGREEMENTS (JUNE 1999)**

Subrecipients, subawardees, and contractors have no relationship with USAID under the terms of this agreement. All required USAID approvals must be directed through the recipient to USAID.

**C.9 OMB APPROVAL UNDER THE PAPERWORK REDUCTION ACT (APRIL 1998)**

Information collection requirements imposed by this grant are covered by OMB approval number 0412-0510; the current expiration date is 11/30/2000. Identification of the Standard Provision containing the requirement and an estimate of the public reporting burden (including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information) are set forth below.

Standard Provision -----	Burden Estimate -----
Air Travel and Transportation	1 (hour)
Ocean Shipment of Goods	.5
Patent Rights	.5
Publications	.5
Negotiated Indirect Cost Rates - (Predetermined and Provisional)	1
Voluntary Population Planning	.5
Protection of the Individual as a Research Subject	
 22 CFR 226 -----	 Burden Estimate -----
22 CFR 226.40-.49 Procurement of Goods and Services	1
22 CFR 226.30 - .36 Property Standards	1.5

Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Procurement, Policy Division (M/OP/P) U.S. Agency for International Development, Washington, DC 20523-7801 and to the Office of Management and Budget, Paperwork Reduction Project (0412-0510), Washington, DC 20503.

**C.10 USAID ELIGIBILITY RULES FOR GOODS AND SERVICES  
(APRIL 1998)**

(a) Ineligible and Restricted Goods and Services: USAID's policy on ineligible and restricted goods and services is contained in ADS Chapter 312.

(1) Ineligible Goods and Services. Under no circumstances shall the recipient procure any of the following under this award:

- (i) Military equipment,
- (ii) Surveillance equipment,
- (iii) Commodities and services for support of police or other law enforcement activities,
- (iv) Abortion equipment and services,
- (v) Luxury goods and gambling equipment, or
- (vi) Weather modification equipment.

(2) Ineligible Suppliers. Funds provided under this award shall not be used to procure any goods or services furnished by any firms or individuals whose name appears on the "Lists of Parties Excluded from Federal Procurement and Nonprocurement Programs." USAID will provide the recipient with a copy of these lists upon request.

(3) Restricted Goods. The recipient shall not procure any of the following goods and services without the prior approval of the Agreement Officer:

- (i) Agricultural commodities,
- (ii) Motor vehicles,
- (iii) Pharmaceuticals,
- (iv) Pesticides,
- (v) Used equipment,
- (vi) U.S. Government-owned excess property, or
- (vii) Fertilizer

Prior approval will be deemed to have been met when:

- (i) the item is of US source/origin;
- (ii) the item has been identified and incorporated in the program description or schedule of the award (initial or revisions), or amendments to the award; and

(iii) the costs related to the item are incorporated in the approved budget of the award.

Where the item has not been incorporated into the award as described above, a separate written authorization from the Agreement Officer must be provided before the item is procured.

(b) Source and Nationality: The eligibility rules for goods and services based on source and nationality are divided into two categories. One applies when the total procurement element during the life of the award is over \$250,000, and the other applies when the total procurement element during the life of the award is not over \$250,000, or the award is funded under the Development Fund for Africa (DFA) regardless of the amount. The total procurement element includes procurement of all goods (e.g., equipment, materials, supplies) and services. Guidance on the eligibility of specific goods or services may be obtained from the Agreement Officer. USAID policies and definitions on source, origin and nationality are contained in 22 CFR Part 228, Rules on Source, Origin and Nationality for Commodities and Services Financed by the Agency for International Development, which is incorporated into this Award in its entirety.

(1) For DFA funded awards or when the total procurement element during the life of this award is valued at \$250,000 or less, the following rules apply:

(i) The authorized source for procurement of all goods and services to be reimbursed under the award is USAID Geographic Code 935, "Special Free World," and such goods and services must meet the source, origin and nationality requirements set forth in 22 CFR Part 228 in accordance with the following order of preference:

- (A) The United States (USAID Geographic Code 000),
- (B) The Cooperating Country,
- (C) USAID Geographic Code 941, and
- (D) USAID Geographic Code 935

(ii) Application of order of preference: When the recipient procures goods and services from other than U.S. sources, under the order of preference in paragraph (b)(1)(i) above, the recipient shall document its files to justify each such instance. The documentation shall set forth the circumstances surrounding the procurement and shall be based on one or more of the following reasons, which will be set forth in the grantee's documentation:

(A) The procurement was of an emergency nature, which would not allow for the delay attendant to soliciting U.S. sources,

(B) The price differential for procurement from U.S. sources exceeded by 50% or more the delivered price from the non-U.S. source,

(C) Compelling local political considerations precluded consideration of U.S. sources,

(D) The goods or services were not available from U.S. sources, or

(E) Procurement of locally available goods and services, as opposed to procurement of U.S. goods and services, would best promote the objectives of the Foreign Assistance program under the award.

(2) When the total procurement element exceeds \$250,000 (unless funded by DFA), the following applies: Except as may be specifically approved or directed in advance by the Agreement Officer, all goods and services financed with U.S. dollars, which will be reimbursed under this award must meet the source, origin and nationality requirements set forth in 22 CFR Part 228 for the authorized geographic code specified in the schedule of this award. If none is specified, the authorized source is Code 000, the United States.

(c) Printed or Audio-Visual Teaching Materials: If the effective use of printed or audio-visual teaching materials depends upon their being in the local language and if such materials are intended for technical assistance projects or activities financed by USAID in whole or in part and if other funds including U.S.-owned or U.S.-controlled local currencies are not readily available to finance the procurement of such materials, local language versions may be procured from the following sources, in order of preference:

- (1) The United States (USAID Geographic Code 000),
- (2) The Cooperating Country,
- (3) "Selected Free World" countries (USAID Geographic Code 941), and
- (4) "Special Free World" countries (USAID Geographic Code 899).

(d) If USAID determines that the recipient has procured any of these goods or services under this award contrary to the requirements of this provision, and has received payment for such purposes, the Agreement Officer may require the recipient to refund the entire amount of the purchase.

This provision must be included in all subagreements which include procurement of goods or services which total over \$5,000.

## **C.11 REGULATIONS GOVERNING EMPLOYEES (AUGUST 1992)**

(a) The recipient's employees shall maintain private status and may not rely on local U.S. Government offices or facilities for support while under this grant.

(b) The sale of personal property or automobiles by recipient employees and their dependents in the foreign country to which they are assigned shall be subject to the same limitations and prohibitions which apply to direct-hire USAID personnel employed by the Mission, including the rules contained in 22 CFR Part 136, except as this may conflict with host government regulations.

(c) Other than work to be performed under this award for which an employee is assigned by the recipient, no employee of the recipient shall engage directly or indirectly, either in the individual's own name or in the name or through an agency of another person, in any business, profession, or occupation in the foreign countries to which the individual is assigned, nor shall the individual make loans or investments to or in any business, profession or occupation in the foreign countries to which the individual is assigned.

(d) The recipient's employees, while in a foreign country, are expected to show respect for its conventions, customs, and institutions, to abide by its applicable laws and regulations, and not to interfere in its internal political affairs.



(e) In the event the conduct of any recipient employee is not in accordance with the preceding paragraphs, the recipient's chief of party shall consult with the USAID Mission Director and the employee involved and shall recommend to the recipient a course of action with regard to such employee.

(f) The parties recognize the rights of the U.S. Ambassador to direct the removal from a country of any U.S. citizen or the discharge from this grant award of any third country national when, in the discretion of the Ambassador, the interests of the United States so require.

(g) If it is determined, either under (e) or (f) above, that the services of such employee should be terminated, the recipient shall use its best efforts to cause the return of such employee to the United States, or point of origin, as appropriate.

### **C.12 CONVERSION OF UNITED STATES DOLLARS TO LOCAL CURRENCY (NOVEMBER 1985)**

Upon arrival in the Cooperating Country, and from time to time as appropriate, the recipient's chief of party shall consult with the Mission Director who shall provide, in writing, the procedure the recipient and its employees shall follow in the conversion of United States dollars to local currency. This may include, but is not limited to, the conversion of currency through the cognizant United States Disbursing Officer or Mission Controller, as appropriate.

### **C.13 USE OF POUCH FACILITIES (AUGUST 1992)**

(a) Use of diplomatic pouch is controlled by the Department of State. The Department of State has authorized the use of pouch facilities for USAID recipients and their employees as a general policy, as detailed in items (1) through (6) below. However, the final decision regarding use of pouch facilities rest with the Embassy or USAID Mission. In consideration of the use of pouch facilities, the recipient and its employees agree to indemnify and hold harmless, the Department of State and USAID for loss or damage occurring in pouch transmission:

(1) Recipients and their employees are authorized use of the pouch for transmission and receipt of up to a maximum of .9 kgs per shipment of correspondence and documents needed in the administration of assistance programs.

(2) U.S. citizen employees are authorized use of the pouch for personal mail up to a maximum of .45 kgs per shipment (but see (a)(3) below).

(3) Merchandise, parcels, magazines, or newspapers are not considered to be personal mail for purposes of this standard provision and are not authorized to be sent or received by pouch.

(4) Official and personal mail pursuant to a.1. and 2. above sent by pouch should be addressed as follows:

Name of individual or organization (followed by letter symbol "G") City Name of post  
(USAID/\_\_\_\_\_) Agency for International Development Washington, D.C. 20523-0001

(5) Mail sent via the diplomatic pouch may not be in violation of U.S. Postal laws and may not contain material ineligible for pouch transmission.

(6) Recipient personnel are NOT authorized use of military postal facilities (APO/FPO). This is an Adjutant General's decision based on existing laws and regulations governing military postal facilities and is being enforced worldwide.

(b) The recipient shall be responsible for advising its employees of this authorization, these guidelines, and limitations on use of pouch facilities.

(c) Specific additional guidance on grantee use of pouch facilities in accordance with this standard provision is available from the Post Communication Center at the Embassy or USAID Mission.

#### **C.14 INTERNATIONAL AIR TRAVEL AND TRANSPORTATION (JUNE 1999)**

##### **(a) PRIOR BUDGET APPROVAL**

In accordance with OMB Cost Principles, direct charges for foreign travel costs are allowable only when each foreign trip has received prior budget approval. Such approval will be deemed to have been met when:

(1) the trip is identified. Identification is accomplished by providing the following information: the number of trips, the number of individuals per trip, and the destination country(s).

(2) the information noted at (a)(1) above is incorporated in: the proposal, the program description or schedule of the award, the implementation plan (initial or revisions), or amendments to the award; and

(3) the costs related to the travel are incorporated in the approved budget of the award.

The Agreement Officer may approve travel which has not been incorporated in writing as required by paragraph (a)(2). In such case, a copy of the Agreement Officer's approval must be included in the agreement file.

##### **(b) NOTIFICATION**

(1) As long as prior budget approval has been met in accordance with paragraph (a) above, a separate Notification will not be necessary unless:

(i) the primary purpose of the trip is to work with USAID Mission personnel, or

(ii) the recipient expects significant administrative or substantive programmatic support from the Mission. Neither the USAID Mission nor the Embassy will require Country Clearance of employees or contractors of USAID Recipients.

(2) Where notification is required in accordance with paragraph (1)(i) or (ii) above, the recipient will observe the following standards:

(i) Send a written notice to the cognizant USAID Technical Office in the Mission. If the recipient's primary point of contact is a Technical Officer in USAID/W, the recipient may send the notice to that person. It will be the responsibility of the USAID/W Technical Officer to forward the notice to the field.

(ii) The notice should be sent as far in advance as possible, but at least 14 calendar days in advance of the proposed travel. This notice may be sent by fax or e-mail. The recipient should retain proof that notification was made.

(iii) The notification shall contain the following information: the award number, the cognizant Technical Officer, the traveler's name (if known), date of arrival, and the purpose of the trip.

(iv) The USAID Mission will respond only if travel has been denied. It will be the responsibility of the Technical Officer in the Mission to contact the recipient within 5 working days of having received the notice if the travel is denied. If the recipient has not received a response within the time frame, the recipient will be considered to have met these standards for notification, and may travel.

(v) If a subrecipient is required to issue a Notification, as per this section, the subrecipient may contact the USAID Technical Officer directly, or the prime may contact USAID on the subrecipient's behalf.

#### (c) SECURITY ISSUES

Recipients are encouraged to obtain the latest Department of State Travel Advisory Notices before travelling. These Notices are available to the general public and may be obtained directly from the State Department, or via Internet. Where security is a concern in a specific region, recipients may choose to notify the US Embassy of their presence when they have entered the country. This may be especially important for long-term posting.

#### (d) USE OF U.S.-OWNED LOCAL CURRENCY

Travel to certain countries shall, at USAID's option, be funded from U.S.-owned local currency. When USAID intends to exercise this option, USAID will either issue a U.S. Government S.F. 1169, Transportation Request (GTR) which the grantee may exchange for tickets, or issue the tickets directly. Use of such U.S.-owned currencies will constitute a dollar charge to this grant.

#### (e) THE FLY AMERICA ACT

The Fly America Act (49 U.S.C. 40118) requires that all air travel and shipments under this award must be made on U.S. flag air carriers to the extent service by such carriers is available. The Administrator of General Services Administration (GSA) is authorized to issue regulations for purposes of implementation. Those regulations may be found at 41 CFR part 301, and are hereby incorporated by reference into this award.

#### (f) COST PRINCIPLES

The recipient will be reimbursed for travel and the reasonable cost of subsistence, post differentials and other allowances paid to employees in international travel status in accordance with the recipient's applicable cost principles and established policies and practices which are uniformly applied to federally financed and other activities of the grantee. If the recipient does not have written established policies regarding travel costs, the standard for determining the reasonableness of reimbursement for overseas allowance will be the Standardized Regulations (Government Civilians, Foreign Areas), published by the U.S. Department of State, as from time to time amended. The most current subsistence, post differentials, and other allowances may be obtained from the Agreement Officer.

#### (g) SUBAWARDS.

This provision will be included in all subawards and contracts which require international air travel and transportation under this award.

**C.15 LOCAL PROCUREMENT (APRIL 1998)**

(a) Financing local procurement involves the use of appropriated funds to finance the procurement of goods and services supplied by local businesses, dealers or producers, with payment normally being in the currency of the cooperating country.

(b) Locally financed procurements must be covered by source and nationality waivers as set forth in 22 CFR 228, Subpart F, except as provided for in mandatory standard provision, "USAID Eligibility Rules for Goods and Services," or when one of the following exceptions applies:

(1) Locally available commodities of U.S. origin, which are otherwise eligible for financing, if the value of the transaction is estimated not to exceed \$100,000 exclusive of transportation costs.

(2) Commodities of geographic code 935 origin if the value of the transaction does not exceed the local currency equivalent of \$5,000.

(3) Professional Services Contracts estimated not to exceed \$250,000.

(4) Construction Services Contracts estimated not to exceed \$5,000,000.

(5) Commodities and services available only in the local economy (no specific per transaction value applies to this category). This category includes the following items:

(i) Utilities including fuel for heating and cooking, waste disposal and trash collection;

(ii) Communications - telephone, telex, fax, postal and courier services;

(iii) Rental costs for housing and office space;

(iv) Petroleum, oils and lubricants for operating vehicles and equipment;

(v) Newspapers, periodicals and books published in the cooperating country;

(vi) Other commodities and services and related expenses that, by their nature or as a practical matter, can only be acquired, performed, or incurred in the cooperating country, e.g., vehicle maintenance, hotel accommodations, etc.

(c) The coverage on ineligible and restricted goods and services in the mandatory standard provision entitled, "USAID Eligible Services," also apply to local procurement.

(d) This provision will be included in all subagreements where local procurement of goods or services is a supported element.

### **C.16 NEGOTIATED INDIRECT COST RATES – PROVISIONAL (APRIL 1998)**

(a) Provisional indirect cost rates shall be established for the recipient's accounting periods during the term of this award. Pending establishment of revised provisional or final rates, allowable indirect costs shall be reimbursed at the rates, on the bases, and for the periods shown in the schedule of this award. Indirect cost rates and the appropriate bases shall be established in accordance with FAR Subpart 42.7.

(b) Within six months after the close of the recipient's fiscal year, the recipient shall submit to the cognizant agency for audit the proposed final indirect cost rates and supporting cost data. If USAID is the cognizant agency or no cognizant agency has been designated, the recipient shall submit three copies of the proposed final indirect cost rates and supporting cost data, to the Overhead, Special Costs, and Closeout Branch, Office of Procurement, USAID, Washington, DC 20523-7802. The proposed rates shall be based on the recipient's actual cost experience during that fiscal year. Negotiations of final indirect cost rates shall begin soon after receipt of the recipient's proposal.

(c) Allowability of costs and acceptability of cost allocation methods shall be determined in accordance with the applicable cost principles.

(d) The results of each negotiation shall be set forth in an indirect cost rate agreement signed by both parties. Such agreement is automatically incorporated into this award and shall specify (1) the agreed upon final rates, (2) the bases to which the rates apply, (3) the fiscal year for which the rates apply, and (4) the items treated as direct costs. The agreement shall not change any monetary ceiling, award obligation, or specific cost allowance or disallowance provided for in this award.

(e) Pending establishment of final indirect cost rates for any fiscal year, the recipient shall be reimbursed either at negotiated provisional rates or at billing rates acceptable to the Agreement Officer, subject to appropriate adjustment when the final rates for the fiscal year are established. To prevent substantial overpayment or underpayment, the provisional or billing rates may be prospectively or retroactively revised by mutual agreement.

(f) Failure by the parties to agree on final rates is a 22 CFR 226.90 dispute.

### **C.17 PARTICIPANT TRAINING (APRIL 1998)**

(a) Definition: A participant is any non-U.S. individual being trained under this award outside of that individual's home country.

(b) Application of ADS Chapter 253: Participant training under this award shall comply with the policies established in ADS Chapter 253, Participant Training, except to the extent that specific exceptions to ADS 253 have been provided in this award with the concurrence of the Office of International Training.

(c) Orientation: In addition to the mandatory requirements in ADS 253, recipients are strongly encouraged to provide, in collaboration with the Mission training officer, predeparture orientation and orientation in Washington at the Washington International Center. The latter orientation program also provides the opportunity to arrange for home hospitality in Washington and elsewhere in the United States through liaison with the National Council for International Visitors (NCIV). If the Washington orientation is determined not to be feasible, home hospitality can be arranged in most U.S. cities if a

request for such is directed to the Agreement Officer, who will transmit the request to NCIV through R&D/OIT.

**C.18 TITLE TO AND CARE OF PROPERTY (COOPERATING COUNTRY TITLE)  
(NOVEMBER 1985)**

(a) Except as modified by the schedule of this grant, title to all equipment, materials and supplies, the cost of which is reimbursable to the recipient by USAID or by the cooperating country, shall at all times be in the name of the cooperating country or such public or private agency as the cooperating country may designate, unless title to specified types or classes of equipment is reserved to USAID under provisions set forth in the schedule of this award. All such property shall be under the custody and control of recipient until the owner of title directs otherwise or completion of work under this award or its termination, at which time custody and control shall be turned over to the owner of title or disposed of in accordance with its instructions. All performance guarantees and warranties obtained from suppliers shall be taken in the name of the title owner.

(b) The recipient shall maintain and administer in accordance with sound business practice a program for the maintenance, repair, protection, and preservation of Government property so as to assure its full availability and usefulness for the performance of this grant. The recipient shall take all reasonable steps to comply with all appropriate directions or instructions which the Agreement Officer may prescribe as reasonably necessary for the protection of the Government property.

(c) The recipient shall prepare and establish a program, to be approved by the appropriate USAID Mission, for the receipt, use, maintenance, protection, custody and care of equipment, materials and supplies for which it has custodial responsibility, including the establishment of reasonable controls to enforce such program. The recipient shall be guided by the following requirements:

(1) Property Control: The property control system shall include but not be limited to the following:

(i) Identification of each item of cooperating country property acquired or furnished under the award by a serially controlled identification number and by description of item. Each item must be clearly marked "Property of (insert name of cooperating country)."

(ii) The price of each item of property acquired or furnished under this award.

(iii) The location of each item of property acquired or furnished under this award.

(iv) A record of any usable components which are permanently removed from items of cooperating country property as a result of modification or otherwise.

(v) A record of disposition of each item acquired or furnished under the award.

(vi) Date of order and receipt of any item acquired or furnished under the award.

(vii) The official property control records shall be kept in such condition that at any stage of completion of the work under this award, the status of property acquired or furnished under this award may be readily ascertained. A report of current status of all items of property acquired or furnished under the award shall be submitted yearly concurrently with the annual report.

(2) Maintenance Program: The recipient's maintenance program shall be consistent with sound business practice, the terms of the award, and provide for:

- (i) disclosure of need for and the performance of preventive maintenance,
- (ii) disclosure and reporting of need for capital type rehabilitation, and
- (iii) recording of work accomplished under the program:

(A) Preventive maintenance - Preventive maintenance is maintenance generally performed on a regularly scheduled basis to prevent the occurrence of defects and to detect and correct minor defects before they result in serious consequences.

(B) Records of maintenance - The recipient's maintenance program shall provide for records sufficient to disclose the maintenance actions performed and efficiencies discovered as a result of inspections.

(C) A report of status of maintenance of cooperating country property shall be submitted annually concurrently with the annual report.

(d) Risk of Loss:

(1) The recipient shall not be liable for any loss of or damage to the cooperating country property, or for expenses incidental to such loss or damage except that the recipient shall be responsible for any such loss or damage (including expenses incidental thereto):

(i) Which results from willful misconduct or lack of good faith on the part of any of the recipient's directors or officers, or on the part of any of its managers, superintendents, or other equivalent representatives, who have supervision or direction of all or substantially all of the recipient's business, or all or substantially all of the recipient's operation at any one plant, laboratory, or separate location in which this award is being performed;

(ii) Which results from a failure on the part of the recipient, due to the willful misconduct or lack of good faith on the part of any of its directors, officers, or other representatives mentioned in (i) above:

(A) to maintain and administer, in accordance with sound business practice, the program for maintenance, repair, protection, and preservation of cooperating country property as required by (i) above, or

(B) to take all reasonable steps to comply with any appropriate written directions of the Agreement Officer under (b) above;

(iii) For which the recipient is otherwise responsible under the express terms designated in the schedule of this award;

(vi) Which results from a risk expressly required to be insured under some other provision of this award, but only to the extent of the insurance so required to be procured and maintained, or to the extent of insurance actually procured and maintained, whichever is greater; or

(v) Which results from a risk which is in fact covered by insurance or for which the grantee is otherwise reimbursed, but only to the extent of such insurance or reimbursement;

(vi) Provided, that, if more than one of the above exceptions shall be applicable in any case, the recipient's liability under any one exception shall not be limited by any other exception.

(2) The recipient shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance, or any provision for a reserve, covering the risk of loss of or damage to the cooperating country property, except to the extent that USAID may have required the recipient to carry such insurance under any other provision of this award.

(3) Upon the happening of loss or destruction of or damage to the cooperating country property, the recipient shall notify the Agreement Officer thereof, shall take all reasonable steps to protect the cooperating country property from further damage, separate the damaged and undamaged cooperating country property, put all the cooperating country property in the best possible order, and furnish to the Agreement Officer a statement of:

(i) The lost, destroyed, or damaged cooperating country property;

(ii) The time and origin of the loss, destruction, or damage;

(iii) All known interests in commingled property of which the cooperating country property is a part; and

(iv) The insurance, if any, covering any part of or interest in such commingled property.

(4) The recipient shall make repairs and renovations of the damaged cooperating country property or take such other action as the Agreement Officer directs.

(5) In the event the recipient is indemnified, reimbursed, or otherwise compensated for any loss or destruction of or damage to the cooperating country property, it shall use the proceeds to repair, renovate or replace the cooperating country property involved, or shall credit such proceeds against the cost of the work covered by the award, or shall otherwise reimburse USAID, as directed by the Agreement Officer. The recipient shall do nothing to prejudice USAID's right to recover against third parties for any such loss, destruction, or damage, and upon the request of the Agreement Officer, shall, at the Government's expense, furnish to USAID all reasonable assistance and cooperation (including assistance in the prosecution of suits and the execution of instruments or assignments in favor of the Government) in obtaining recovery.

(e) Access: USAID, and any persons designated by it, shall at all reasonable times have access to the premises wherein any cooperating country property is located, for the purpose of inspecting the cooperating country property.

(f) Final Accounting and Disposition of Cooperating Country Property: Within 90 days after completion of this award, or at such other date as may be fixed by the Agreement Officer, the recipient shall submit to the Agreement Officer an inventory schedule covering all items of equipment, materials and supplies under the recipient's custody, title to which is in the cooperating country or public or private agency designated by the cooperating country, which have not been consumed in the performance of this award. The recipient shall also indicate what disposition has been made of such property.

(g) Communications: All communications issued pursuant to this provision shall be in writing.



### **C.19 PUBLIC NOTICES (AUGUST 1992)**

It is USAID's policy to inform the public as fully as possible of its programs and activities. The recipient is encouraged to give public notice of the receipt of this award and, from time to time, to announce progress and accomplishments. Press releases or other public notices should include a statement substantially as follows:

"The U.S. Agency for International Development administers the U.S. foreign assistance program providing economic and humanitarian assistance in more than 80 countries worldwide."

The recipient may call on USAID's Office of External Affairs for advice regarding public notices. The recipient is requested to provide copies of notices or announcements to the cognizant technical officer and to USAID's Office of External Affairs as far in advance of release as possible.

### **C.20 COMMUNICATIONS PRODUCTS (OCT 1994)**

(a) Definition - Communications products are any printed material (other than non-color photocopy material), photographic services or video production services.

(b) Standards - USAID has established standards for communications products. These standards must be followed unless otherwise specifically provided in the agreement or approved in writing by the agreement officer. A copy of the standards for USAID-financed publications and video productions is attached.

(c) Communications products which meet any of the following criteria are not eligible for USAID financing under this agreement unless specifically authorized in the agreement schedule or in writing by the Agreement Officer:

(1) Any communication products costing over \$25,000, including the costs of both preparation and execution. For example, in the case of a publication, the costs will include research, writing and other editorial services (including any associated overhead), design, layout and production costs.

(2) Any communication products that will be sent directly to, or is likely to be seen by, a Member of Congress or Congressional staffer.

(3) Any publication that will have more than 50 percent of its copies distributed in the United States (excluding copies provided to PPC/CDIE and other USAID/W offices for internal use).

### **C.21 COST SHARING (MATCHING) (JAN 2002)**

(a) If at the end of any funding period, the recipient has expended an amount of non-Federal funds less than the agreed upon amount or percentage of total expenditures, the Agreement Officer may apply the difference to reduce the amount of USAID incremental funding in the following funding period. If the award has expired or has been terminated, the Agreement Officer may require the recipient to refund the difference to USAID.

(b) The source, origin and nationality requirements and the restricted goods provision established in the Standard Provision entitled "USAID Eligibility Rules for Goods and Services" do not apply to cost sharing (matching) expenditures.

**C.22 PAYMENT (LETTER OF CREDIT) (FEBRUARY 1997)**

- a. Payment under this grant shall be by means of a Letter of Credit (LOC) in accordance with the terms and conditions of the LOC and any instructions issued by the USAID Bureau for Management, Office of Financial Management, Cash Management and Payment Division (M/FM/CMP).
- b. As long as the LOC is in effect, the terms and conditions of the LOC and any instructions issued by M/FM/CMP constitute the payment conditions of this grant superseding and taking precedence over any other clause of this grant concerning payment.
- c. The grantee should have written procedures that minimize the time elapsing between the transfer of funds and disbursement by the recipient. The grantee shall exercise prudent management of Federal funds by drawing only those funds which are required for current use. The timing and the amount of the drawdown shall be as close as is administratively feasible to the actual disbursements by the grantee for direct program or activity costs and the proportionate share of any allowable indirect costs.
- d. If the LOC is revoked, payment may be made on a cost-reimbursement basis, in accordance with paragraph (f) of this clause.
- e. Revocation of the LOC is at the discretion of M/FM/CMP after consultation with the grant officer. Notification to the recipient of revocation must be in writing and must specify the reasons for such action.
- f. If the LOC is revoked, the grantee shall submit to the USAID Controller an original and 3 copies of SF 1034, "Public Voucher for Purchases and Services Other Than Personal" and SF 1034A, Continuation of SF 1034, normally once a month, but in any event no less than quarterly. Each voucher shall be identified by the grant number and shall state the total costs for which reimbursement is being requested.