

ANNUAL REPORT FOR YEAR SIX
(October 1, 2009 – July 14, 2010)

AND

ANNUAL IMPLEMENTATION PLAN FOR YEAR SEVEN
(July 15, 2010 – July 14, 2011)

The Egyptian Antiquities Conservation Project (EAC)
USAID Agreement No. 263-A-00-04-00018-00

Awarded to

THE AMERICAN RESEARCH CENTER IN EGYPT (ARCE)

Address: 8700 Crownhill Blvd. Suite 507, San Antonio, TX 78209 Tel: (210) 821-7000

by the

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TABLE OF CONTENTS

Executive Summary and Highlights of Progress for the Year

Description of Projects:

Cycle One Projects

- Field School for SCA Inspectors (continued in Cycle 5)
- Test Cleanings of Roman Wall Paintings in Luxor Temple (continued in Cycle 2)
- Marina El-Alamein Site Presentation (suspended)
- Conservation and Display of Early Cells at St. Anthony's Monastery

Cycle Two Projects

- Conservation and Documentation of Wall Paintings at the Red Monastery in Sohag
- Roman Wall Paintings Conservation in Luxor Temple (completed)
- Conservation and Tomb of Menna

Cycle Three Projects

- Emergency Intervention – Luxor Temple
- Emergency Intervention – Karnak Temple
- Luxor Groundwater and Structural Monitoring
- Luxor Conservation Center
- Field School for Architectural Conservators
- Sacred Lakes
- Mut Temple Foundations (completed)

Cycle Five Projects

- Shunet el-Zebib, Abydos
- Documentation and Conservation at the Red Monastery, Sohag
- ARCE Field School (Giza)
- St. Antony's Museum
- Site Management in Historic Cairo

EAC Budget; July 15, 2010 – July 14, 2011

Grant Modifications and Funding Table

Appendices:

1. Articles and Publications on ARCE projects
2. Training Completed Since Project Inception
3. Table of EAC Projects
4. Site visits and presentations on ARCE projects

ANNEX A: Illustrated summaries of completed projects

EXECUTIVE SUMMARY

This report covers the period July 15, 2009 through July 14, 2010 (Year 6 of the EAC Project). The main activities during this period were as follows:

- Cycle One: Ongoing implementation of two projects; completion of the fourth ARCE Field School (to be continued in Cycle 5), and virtual completion of St. Anthony's Monastic Cells in Year 6
- Cycle Two: Ongoing implementation of three projects; completion of Tomb of Menna and Aslam Silahdar Mosque in Year 6
- Cycle Three: Ongoing implementation of five projects in addition to the Publication program; completion of Mut Temple Foundations and Luxor Conservation Center in Year 6
- Cycle Four: All projects completed prior to Year 6
- Cycle Five: Commencement of five projects funded under Modification No. 6 to the USAID agreement, two of which are continued from previous funding cycles.
- Supervisory site visits by ARCE Management and Project review visits with officials from USAID
- Opening ceremony for Aslam Silahdar mosque in October 2009.
- Participation in ARCE's annual meeting, conferences, and lectures.
- Cooperation in the relationship with the SCA, and approvals by the SCA Permanent Committee.

Egyptian Antiquities Conservation Project

Annual Report: Year Six

(October 1, 2009 – July 14, 2010)
 and

Implementation Plan: Year Seven

(July 15, 2010 – July 14, 2011)

INTRODUCTION

This is the annual report for Year Six and the implementation plan and budget for Year Seven of the Egyptian Antiquities Conservation (EAC) Project, Cooperative Agreement No. 263-A-00-04-00018-00, awarded to the American Research Center in Egypt (ARCE) by the United States Agency for Development (USAID) on July 15, 2004.

On July 30, 2008, ARCE sent a proposal to USAID for furthering conservation and training initiatives by extending the EAC grant through July 2014. **On July 7, 2009 USAID signed Modification No. 6, increasing the estimated value of the EAC Agreement to LE 149,851,153 and extending the completion date until July 14, 2014.**

The goal of the EAC Project is to safeguard Egypt’s cultural heritage and to promote tourism through the development of the Egyptian Supreme Council of Antiquities’ (SCA) institutional capacity and the conservation of specific historic sites.

CYCLE ONE PROJECTS

The following four projects were approved by USAID for Cycle One subproject implementation, and scheduled to commence in Year One.

Project Name	Grantee Name	Location	Start / End Date	Status
Field School for SCA Inspectors	Ancient Egypt Research Associates, Inc. (AERA)	Giza Plateau	Dec-06 / July 2009	100% completed *
Marina El-Alamein Site Presentation	Agnieszka Dobrowolska	Mediterranean Coast	Jun-05 / --	Suspended
Conservation and Display of Early Cells at St. Anthony’s Monastery	Fr. Maximous al-Anthony	Red Sea Coast	May-06 / Dec-10	99% completed
Test Cleanings of Roman Wall Paintings In Luxor Temple	Luigi De Cesaris & Alberto Sucato, Restorers	Luxor	Nov 15-30th ‘05	100% completed **

* continued funding under Cycle 5

** continued funding under Cycle 2

Field School for SCA Inspectors

Statement of the Project: ARCE originally planned to conduct two field school training courses at the Giza Plateau Mapping Project, under the direction of Dr. Mark Lehner, thus enabling a continuing cadre of antiquities inspectors to receive practical and theoretical training. In 2006, the Field School introduced a new “Apprenticeship Program,” aimed at consolidating specific skills for individual trainees to attain a higher level of competence in their respective fields. Each student designed a research strategy for a chosen archaeological project that must be derived from an archaeological site or material that the student is actually familiar with. Students learned to formulate a coherent research design scope, which includes duration, size and qualifications of crew, and budget.

Additional Funding: In response to the emphatic support and appreciation shown by Dr. Zahi Hawass, Secretary General of the Supreme Council of Antiquities, ARCE increased funding in Year Three to conduct two additional field school training seasons at the Giza Plateau Mapping Project, under the direction of Dr. Mark Lehner. The ARCE Field School has won public recognition as a “model of reform” within the SCA, and a successful capacity building project that garners expertise from the international archaeological community to share knowledge about excavation, recording and conservation techniques and standards in a “hands-on” environment.

Year 6 Results: Four field school seasons were successfully completed at the Giza Plateau Mapping site. A total of 110 SCA inspectors from the Cairo and Giza region have been trained. Of this group, ___ are females.

<u>Dates:</u>	<u>Type: No. Trained:</u>
Field School #1: Jan. 25 – March 22, 2005	Beginners - 18 students (4 females)
Field School #2: Sept. 29 –December 22, 2006	Apprenticeship - 32 students (10 females)
Field School #3: Feb. 2 – April 30, 2007	Beginners & Advanced - 23 students (7 females)
Field School #4: Feb. 7 – April 3, 2009	Advanced - 38 students (15 females)

In July 2009, USAID approved an extension to the grant with additional funding for the continuation of the Field School for SCA Inspectors. The continued activities will be carried out in Cycle 5, commencing in Fall 2009.

Total Expenditure for Cycle One: LE 3,711,479 (See Cycle 5 for continuation)

Test Cleanings of the Roman Wall Paintings at Luxor Temple

Statement of the Project: The Luxor Temple, on the UNESCO list of most important World Heritage sites, contains a series of unique Roman wall paintings datable to the reign of the Emperor Diocletian (AD 284-305). In the late 3rd century AD, the Temple was incorporated into a Roman legionary fortress. One of the inner rooms of the temple was converted into a shrine dedicated to the Roman emperors. The original Pharaonic decoration was plastered over and a new cycle of paintings was added showing the emperors and their courts. Since they were first excavated in the 19th century, these paintings have suffered from neglect and in recent years the deterioration has accelerated. This is largely due to atmospheric humidity and serious air pollution caused by the Nile cruise boats moored nearby.

The location of the project is on the main tourist route through the Luxor Temple, and this project will provide maximum exposure to USAID’s commitment to the preservation of Egypt’s cultural heritage and to tourism enhancement.

Year 6 Results: Four test cleanings in selected areas of the shrine were completed in November 2005. The report was received from the conservators, showing that the tests were successful, and recommending a conservation project.

Total Expenditure: LE 118,606 (See Cycle 2 for continuation)

Marina El-Alamein Site Presentation

Statement of the Project: The goal of this project is to present the site to the general public, and to protect and preserve it by permitting public visitation in an organized and controlled way. The project plans to remove debris dumps, landscape the area, and integrate existing archaeology into a more accessible and recognizable historical site for display and presentation to visitors. The project plans to design and construct entrance facilities comprising a parking area, entrance gate, ticket and information office, and to create a visitor’s route through the area, install signage and lighting, and adapt an enclosed area of the ruins for the display of artifacts.

Year 6 Results: The project consists of three stages of work, commencing in June 2005 and ending December 2007. The third stage, implementation of site presentation design, was approved in August 2006, and the budget was revised to add this stage.

Although it began as a collaborative effort between the SCA, ARCE and the Polish Center for Mediterranean Studies in Cairo, completion of the last component was delayed during the past year as a result of a change in directorship at the Polish Institute. A recent intervention by Dr. Zahi Hawass resulted in resumption of activities at Marina implemented by the SCA, with a revised design for the entire site to include a new museum. ARCE cooperated by contributing an architectural design of the museum by staff member Dr. Alaa el-Habashi.

Total Expenditure: LE 2,499,840

Conservation and Display of Early Cells at St. Anthony's Monastery

Statement of the Project: During renovation works directed at correcting subsidence under the floor of the Church of the Holy Apostles at the Monastery of St. Anthony, remains of an earlier church and of an ancient cell were discovered. The early church was built over the cell and the material filling it. The cell is partly rock-cut, hollowed from a natural cave in the desert escarpment under the church, and partly built onto the front of the cave. Thus there is an archaeological building sequence comprising (earliest to latest) the cave, the cell, the early church and the present church. The proximity to the ancient church of St. Anthony, which is known from previous ARCE work to have developed from a rock shelter or cell, suggests that the new discovery forms part of the same sequence of buildings. The materials filling the cell were excavated and removed under the supervision of Fr. Maximous el-Anthony.

Year 6 Results: Between 2006 and 2010 this group of early structures relating to the historic development of the monastery were conserved and displayed to visitors to enhance their understanding of the site. A team of archaeologists, conservators and skilled technicians recorded the discovery and conserved the structural remains. Since the discovery is beneath the church floor, the cells were covered with a glass ceiling at the floor level of the church so that visitors are able to look down at the preserved remains. Information displays will be produced and installed in late 2010.

Estimated Budget for Year Seven: LE 12,855 (LE 347,945 spent to date)

CYCLE TWO PROJECTS

October 1, 2005 – July 15, 2009

Six Cycle Two projects were approved by USAID in EAC’s Year Two plan:

Project Name	Grantee Name	Location	Start / End Date	Status
Roman Wall Paintings Conservation in Luxor Temple	Luigi De Cesaris and Alberto Sucato, Restorers	Luxor	Oct. '06 – Dec. '08	100% completed
Conservation and Documentation of Wall Paintings at the Red Monastery	Dr. Elizabeth Bolman	Sohag	Sept. '06 to July '09	100% completed *
Conservation of the Mosque of Aslam al-Silahdar (Cairo)	Christophe Bouleau (ARCE in partnership with Aga Khan Cultural Services in Egypt)	Cairo	May '06 to March '09	100% completed
Roman Wall Paintings Conservation in Luxor Temple	Luigi De Cesaris and Alberto Sucato, Restorers	Luxor	Oct. '06 – Dec. '08	100% completed
Conservation and Documentation of the Tomb of Menna	Dr. Melinda Hartwig (Georgia State University)	Luxor	Feb '07 to Dec. '09	100% completed
Site Management Implementation	ARCE-Managed	Luxor	Oct. '06 – Dec. '11	Ongoing
Egyptian Museum Registrars Training	Dr. Janice Kamrin (ARCE-managed)	Cairo	Oct. '06 – Jan. '11	Ongoing

* CONTINUED FUNDING UNDER CYCLE 5

CYCLE TWO PROJECT DESCRIPTIONS

The project descriptions below describe accomplishments to date under the EAC Program Plan for Cycle Two funding.

Conservation and Documentation of Wall Paintings at the Red Monastery

Introduction: The Red Monastery church contains the only complete pre-medieval paintings surviving in Egypt in their original functioning context. The church dates to c. AD500 and the paintings are from 6th to 9th centuries. Since 2002, ARCE/EAP has been working with the Italian wall painting conservators, Luigi de Cesaris and Alberto Sucato, under the direction of Elizabeth Bolman, on a conservation project to historically document, clean and protect these important paintings.

Implementation: Due to the necessity to schedule around Coptic holidays and seasonal temperature conditions, five short (rather than three long) campaigns were conducted each fall and spring, beginning in Fall 2006. The fifth conservation campaign was successfully completed in Spring 2009.

Year 6 Results: By the end of the fifth campaign, approximately half of the paintings in the church were conserved, revealing details of medieval Coptic painting of significant art historical value. Photographic documentation, art historical and graphic documentation proceeded in parallel with conservation work. In July 2009, USAID approved an extension to the grant with additional funding for the continuation of work at the Red Monastery.

Total Cycle 2 Expenditures: LE 8,050,232 (See Cycle 5 for continuation)

Conservation of the Mosque of Aslam Silahdar in Cairo

Statement of the Project: The Mamluk mosque of Aslam al-Silahdar dates from 1344 and is located in the Darb al-Ahmar district, within the old city walls of historic Cairo. The building is a typically harmonious blend of elaborate decoration in different materials. It combines formally designed parts in a freely composed, asymmetrical, yet well-balanced whole. It also has some special and unique features. The mausoleum was the original structure, standing in the corner of an open courtyard. Like most Cairene religious buildings from the Mamluk period, it was endowed as a *madrasa*, or religious school, and was laid out in a cruciform plan with a prayer hall containing four deep recesses, or *liwans*, that opened onto the central courtyard. The courtyard is covered with a wooden roof dating to the early 20th century. Arcades supported on marble columns that open onto the courtyard from the side *liwans* are an unusual feature. They lend the interior an aspect similar to arcaded open-courtyard mosques. The mausoleum of the amir is in the southeastern corner. It is covered with a soaring dome supported within on tiers of elegant stucco *muqarnas* niches. The drum of the dome is decorated externally with calligraphy and crenellations in ceramic tiles, another rare feature in Cairo. The amir later added the mosque and the minaret, which has since been replaced by a more recent construction. Many different materials and techniques are combined in the decoration of the building to achieve a harmonious and appealing overall effect. Among these, faience tiles embedded in elaborate stucco decoration enhanced with touches of brilliant color add another unusual feature.

No conservation action has been taken on the building since the 1920's and its condition has deteriorated. Located at the connecting point between the recently conserved Bab Zuwayla and Al-Azhar Park, the mosque is ideal as a catalyst for local development through cultural tourism. ARCE formed an institutional partnership with Aga Khan Cultural Services in Egypt (a local division of the Aga Khan Trust) to oversee and fund the work between June 2006 and March 2009. Funding was provided by the US Ambassador's Fund, ARCE's Egyptian Antiquities Conservation grant from the United States Agency for International Development (USAID), and the Aga Khan Trust for Culture. The conservation project is designed to ensure the long-term structural stability of the building, to conserve the authenticity of the historical artifacts it includes and to reinstate the architectural integrity of the monument by addressing the problems stemming from decades of neglect.

Implementation: Onsite implementation of the project was completed in three years (May 2006 – March 2009), divided into three phases:

- Preparation (surveys, documentation, mobilization) : 3 months
- Conservation work (foundation stabilization, infrastructure, interior repair, signage): 30 months
- Post-field work (photo-documentation, publication): 3 months

Year 6 Results: The conservation team consolidated the stone masonry of the walls, cleaned and repaired the stone and plaster of the interior and exterior façades, installed new roof covers, restored the ceramic tiles on the dome of the founder's mausoleum, and repaired the woodwork of roofs, floors and galleries. Fine art conservators treated the elaborate limestone, marble, stucco, and stained glass decoration, as well as painted wooden ceilings and exquisitely carved wooden panels of doors, shutters and the pulpit. The purpose of the work was to consolidate, preserve, and protect the authentic historic fabric, not attempting to re-create what time had removed. Interventions were preceded by studies, tests, and trials; existing conditions and all stages of the work were carefully documented.

Conservation of the mosque was completed on schedule. Aga Khan Foundation held a ceremony inaugurating the newly-renovated square, shops and mosque in October 2009. A plaque, acknowledging USAID's involvement in the conservation of the mosque, was hung at the building's entrance.

Total Expenditure: LE 3,453,705

Total Aga Khan share of the project cost LE 1,728,970 (not included in above budget)

Roman Wall Paintings Conservation in Luxor Temple

Statement of the Project: Based on the results of the Test Cleanings conducted in November 2005, the project was approved by USAID for funding under EAC Cycle Two. The implementation schedule was determined by Chicago House's season, which operates from mid-October to mid-April each year. In Fall 2006 work commenced on conservation of the wall paintings.

Year 6 Results: This project was carried out in collaboration with The Epigraphic Survey at Chicago House in Luxor, who hold the concession at Luxor Temple. Chicago House provided logistical support, e.g. scaffolding, SCA permission and clearances, as well as the services of their photographer, Yarko Kobylecki, to undertake photo-documentation of the paintings. Three two-month campaigns were carried out in the fall of 2006, 2007 and 2008.

All five walls have received conservation treatment. The best-preserved sections of the original Roman paintings are on the south wall, which contains a ceremonial apse. The cleaning of the plaster has exposed paintings of exceedingly high quality, the only known example of true fresco in Egypt. They were certainly carried out by artists directly associated with the imperial court, probably part of Diocletian's personal entourage. In the southeast corner of the Luxor temple, the various officers and officials making up Diocletian's elite entourage are revealed, in a strikingly realistic manner.

Important fragments of the figural scenes showing the parade of soldiers and horses survive on the east wall although severe losses to the paint layers have occurred. The south and east walls are best preserved in their upper sections. The west wall is only preserved in its lower section. No Roman paintings survive on the northeast wall. Here Roman preparatory plaster layers were cleaned and integrated into the overall aesthetic appearance of the sandstone masonry

By the end of 2008, all of the painted areas were cleaned. Photography for publication of a book on the Roman Wall Paintings was done by the Vescovo Brothers in February 2009.

Total Expenditure: LE 2,621,666

Conservation and Documentation of the Tomb of Menna

Statement of the Project: The tomb of Menna (TT 69) is one of the finest painted non-royal ancient Egyptian tombs. The tomb has been open to the public since the 1960's, which, along with environmental changes in Egypt, has resulted in the deterioration and destabilization of the chapel paintings. Between February 2007 and December 2009, the project documented, conserved, protected, and published the tomb of Menna and its paintings in order to bring this remarkable tomb to a larger audience.

Implementation: Two main field seasons were originally proposed, following a brief assessment of the tomb by the principal project staff in Spring 2007. The second season in Fall 2008 was shortened, due to necessary changes and leave of absence of key members in the team. A third season was conducted in Year Five, within the estimated budget for the project.

Year 6 Results: To record the paintings and texts, the project photographed the decoration digitally and in 35mm black and white film. X-ray fluorescence (XRF), X-ray diffraction (XRD), RAMAN spectrometry, and chromatic characterization was utilized to gauge the physio-chemical composition of the pigments, varnishes, etc., which will provide important information for conservators and art historical analyses. To produce line drawings of the decoration and epigraphy for publication, digital photographs of the wall decoration were referenced three-dimensionally in a process known as "digital epigraphy." The application of these technologies to the tomb walls is the first of its kind: they are non-invasive and will aid the recording and preservation of the tomb.

Conservation of paintings was completed in October 2008. A second short campaign occurred in the Spring of 2009 to conduct final digital photography. Final site presentation installations (wooden floor, handrails, lighting and display signs) were completed in Fall 2009. The final report will be submitted in Fall 2010.

Total Expenditures: LE 1,940,309

ARCE INSTITUTIONAL DEVELOPMENT PROJECTS:

Site Management Implementation

Statement of the Project: Under the EAP Post-Grant Conservation Program, ARCE funded a site management training project for SCA employees. This project focused on the present conditions and the opportunities for enhancement on the west bank at Luxor. Trainees were drawn from the SCA inspectors currently stationed at the regional inspectorates between Esna and Sohag. Part of the training program involved creating a management plan for the Medinet Habu temple complex. Under the EAC Cycle Two program, the management plan for Medinet Habu produced in the training project will be used to create specifications for a contract to be competitively awarded in Year Three for site improvements at Medinet Habu. The site of Medinet Habu was selected because there has been an active American archaeological presence since 1925. The site is a discrete area with clear limitations but it is also part of the greater Luxor archaeological landscape in which the lessons learnt here could be applied on a broad front. The project at Medinet Habu will be carried out in collaboration with Chicago House.

An appropriately sensitive and easily maintained plan will involve installation of pathways, directional and information signage in Arabic and English, enhancement of toilet facilities, designated viewing areas with sunshades at strategic points (palace, Sea Peoples battle scenes, lion hunt scene, etc.). Participation by the tourism sector and local community and awareness raising is also envisaged as part of the plan.

Year 6 Results: Slow progress has been made with in-house graphics and production of a reduced number of signs to be installed at Medinet Habu. Texts for the signs were submitted to Chicago House in October, 2009 for review and approval.

Planned Activities for Year Seven: ARCE intends to complete in-house production of signs in English and Arabic. The cost for production and installation will be included in the Year 8 budget.

Estimated Budget for Year Seven: (LE): 0 (LE 459,375 spent to date)

Egyptian Museum Registrars Training

Statement of the Project: This training program seeks to create and institutionalize a Registrations and Collections Management Department (RCMD) within the Egyptian Museum, which will then serve as a model for the Museum Sector of Egypt's Supreme Council of Antiquities (SCA). In order to implement the project, four new registrars will be identified and trained, appropriate equipment and supplies will be acquired, and a collection management system (in both manual and computerized formats) will be designed. The implementation period also runs concurrently and complementarily with a \$49,400 planning grant, awarded to ARCE by The Andrew W. Mellon Foundation, providing support for the assessment and selection of new museum collections management software.

Year 6 Results:

Registrar Training: The number of four newly appointed registrars originally targeted for training doubled over the project period. Eight appointees received daily hands-on training from 9:30-12:00 followed by individual project work for the remainder of the day. Starting in January 2007, a two-week seminar was delivered every three months by visiting project consultant, Rachel Mauldin, on the components and procedures of the Collections Management System. After the last seminar was delivered in June 2010, the Registrations and Collections Management Department (RCMD) Protocol was finalized and delivered by the Project Director to ARCE and the Museum. On September 20, 2010 eight registrars were awarded certificates of completion at a graduation ceremony attended by Dr. Zahi Hawass, Dr. Gerry Scott, and Dr.

Janice Kamrin. Two students received certificates of participation. Three registrars attended the 3rd International Registrars Symposium (Chicago) in November 2009.

Development of a Collections Management System: The KE EMu collections management system for the Egyptian Museum was selected and implemented. A state-of-the-art system, adapted for use in the current environment of the SCA's museum sector, the KE Emu system was funded by the Mellon Grant. The comprehensive collection management system, developed under the EAC Registrars Training Project, includes both manual and computerized components, such as: object movement, accessioning, outgoing loans, in-house exhibitions, scholar study, condition reporting, and gallery inventory.

Planned Activities for Year Seven: Mod. No. 6, signed in July 2009, extended this project until January 2011, to correspond with the end of the Andrew W. Mellon Foundation-funded Egyptian Museum Database Project. Daily supervision by the project team will continue, as well as training selected staff to perform high-level tasks such as database administration.

Estimated Budget for Egyptian Museum Registrars Training (Year 7): LE 403,125 (LE 4,561,608 spent to date)

LUXOR EAST BANK AMENDMENT (CYCLE 3)

March 1, 2007 – July 14, 2014

Introduction

ARCE-managed projects under the Luxor East Bank Groundwater Lowering Response have five main deliverables:

1. A monitoring system;
2. A conservation program for the temples of Karnak, Mut and Luxor;
3. A training program for SCA conservators;
4. Establishment of a conservation center with laboratory, and
5. Documentation and publication of conservation activities.

Project Implementation Schedule: The period March 1 to September 30, 2007 was devoted to establishing the Luxor office, staff recruitment, project planning and mobilization. The original timeframe for project implementation (between October 1, 2007 and July 14, 2009) was not sufficient to complete the planned activities, once the mobilization period and needs assessments were completed. With USAID approval of ARCE's requested extension, on-site activity in Luxor was extended until 2013, allowing for demobilization and reporting in 2014.

This annual report covers the third season for the ARCE East Bank Groundwater Lowering Response program. The 2009-2010 conservation season and field school started in late September 2009; the Field School was completed on May 28, 2010. Planning and preparatory work on the site continued until July 14, 2010. The official end of the season is July 14, 2010.

Cycle Three Program Descriptions

The following projects were approved by USAID for Cycle Three subproject implementation, commencing in Year Three (2007).

Project Name	Principal Consultants	Location	Start / End Date	Status
Emergency Conservation at Luxor Temple: Roman Bastion	Dr. Pamela Rose, ARCE (Season One) and Aurelie Schenck, Chicago House (Season Two)	Luxor Temple, East Bank	Oct. 2009 – June 2011	Ongoing
Emergency Conservation at	Ed Johnson, ARCE	Luxor Temple,	January -	Completed

Luxor Temple: Pest Netting		East Bank	February 2010	
Emergency Conservation at Luxor Temple: Salvage Archaeology Field School	Dr. Mark Lehner, Ancient Egyptian Research Associates	Luxor Temple, East Bank	January - March 2010	Completed
Emergency Conservation at Luxor Temple: Rameses II Columns	Khadija Adam Tho, ARCE	Luxor Temple, East Bank	December 1, 2010 - June 30, 2011	Ongoing
Emergency Conservation at Karnak Temple: Khonsu Walls	Christie Pohl (ARCE)	Karnak Temple, East Bank	April 2008 – June 2011	Ongoing
Emergency Conservation at Karnak Temple: Euergetes Gate	Christie Pohl (ARCE)	Karnak Temple, East Bank	Oct. 2009 – June 2011	Ongoing
Emergency Conservation at Karnak Temple: Khonsu Epigraphy	Chicago House	Karnak Temple, East Bank	Oct. 2009 – June 2011	ngOngoi
Emergency Conservation at Karnak Temple: Khonsu Stone Masonry	Dany Roy and John Shearman (ARCE)	Karnak Temple, East Bank	Oct. 2009 – June 2011	Ongoing
Emergency Conservation at Karnak Temple: Karnak Second Pylon	Christie Pohl (ARCE)	Karnak Temple, East Bank	Oct. 2009 – June 2011	Ongoing
Emergency Conservation at Karnak Temple: Talatat Project	Dr. Jocelyn el Gohary (ARCE)	Karnak Temple, East Bank	October 2008 – June 2011	Field work completed
Conservation of the Mut Temple Foundations	Dr. Betsy Bryan (Johns Hopkins University)	Mut Temple, Karnak Complex, East Bank	April-07 - June-09	Completed
Groundwater and Structural Monitoring	John Shearman and Magdy Mokhtar (ARCE)	Karnak Complex, East Bank	April-07 - July-11	Ongoing
Preservation of the Sacred Lakes	John Shearman and Magdy Mokhtar, (ARCE) ARCE	Karnak and Mut Temples	April-07 - July-12	Ongoing
Field School for SCA Architectural Conservators	John Shearman and Saieed Hamed (ARCE)	Karnak Temple	April-07 - July-12	Ongoing
Luxor Conservation Center	Ed Johnson and Christie Pohl (ARCE)	Karnak Temple	April-07 - July-09	Completed
Signage	John Shearman (ARCE)	Karnak and Luxor Temples	July 2010 – July 2011	Ongoing
Documentation and Publication	Kathleen Scott (ARCE)	Cairo – Luxor	April '07 - Extended to July 2014	Ongoing

In addition to managing sub-agreements for conservation at Luxor Temple, Khonsu Temple, and Mut Temple, ARCE directly implements or manages major activities included in the Luxor East Bank Groundwater Lowering Response Project. ARCE has chosen to implement these activities, e.g. monitoring, training, establishing and equipping a conservation center, and a field school for SCA conservators, as it will prove more cost-effective than sub-contracting such activities to outside organizations.

Seventeen (17) projects made up the season with five (5) now completed. The work covered projects in both Karnak Temple and Luxor Temple.

Emergency Conservation at Luxor Temple

Statement of the Project: At the outset of this project, the effects of the groundwater lowering remained unknown. It was anticipated that an increase in salt efflorescence could possibly destroy the relief decoration on the temple walls and their foundations, in addition to structural destabilization. In order to address the negative effects as they occur with immediate remedial intervention, ARCE's Luxor East Bank Groundwater Lowering Project included an Emergency Intervention component. With these dedicated funds, ARCE, Chicago House, and other stakeholders hired the necessary specialists and procured the necessary equipment and supplies to conduct the conservation intervention. Projects included desalination of decorated and undecorated stone, the replacement of badly deteriorated blocks where possible, moving displaced blocks from direct contact with a wet environment, and correction of any destabilized architectural elements, etc.

Any conservation treatment within the Luxor Temple complex requires the active involvement of Dr. Ray Johnson and his Chicago House (Oriental Institute, University of Chicago) team. With the existing conditions report prepared by ARCE in Year 4 as a background and in close coordination with Dr. Johnson, ARCE identified potential conservation projects within Luxor Temple, including an archaeological investigation of the Roman ruins within the temple. Chicago House requested SCA Permanent Committee clearance for all planned conservation work. Ongoing and completed small projects are listed below:

Year 6 Results:

Luxor Temple Roman Bastion: The Temple of Luxor formed the center of a late Roman fortress built by Diocletian in the late third century AD. Most of the fortress walls have been destroyed, but one small area is preserved at the northeast corner of Luxor Temple, where an ovoid red brick tower against the north face of the east wing of the first pylon forms part of the north wall of the fort, and immediately to the east of the pylon a narrow gateway through the wall, and part of the mud brick wall itself still survives still standing two meters above the current ground level. Within the thickness of the wall a stone flagged staircase is preserved. The mud brick is in particularly poor condition and in need of conservation. The lower part of the wall is currently covered by archaeological deposits, and the SCA wishes to remove those to the north. Led by archaeologist Dr. Pamela Rose (ARCE), during the 2009-10 season, the project exposed some of the surviving Roman architectural remains, which have not previously been recorded in detail. The findings were recorded and the site prepared for conservation and restoration to be done the following season. The total cost in Year 6 was LE 112,093

Luxor Temple Pest Netting: Pigeon and bat droppings continue to plague many monuments throughout Egypt. Luxor Temple is not the exception. In order to reduce the damage, pest netting was installed in the ante chapel of the Sanctuary of Amun and the Sanctuary itself, under the direction of Ed Johnson, (ARCE), during the 2009-2010 season. A metal mesh was installed on a wooden frame over roof openings and in two doorways of the ante chapel, which dates to the time of Alexander the Great. Work was completed between January and February 2010 at a total cost of LE 13,400.

2nd Salvage Archaeology Field School: In an area to the west of the Luxor Temple Avenue of Sphinxes lie the only known remains of the old Luxor Tell (The Ottoman city of Luxor). With the possibility of the tell being destroyed, a joint effort by the SCA, ARCE and Ancient Egypt Research Associates (AERA) was formed to implement a salvage field school to train SCA individuals in the means and methods of salvage and rescue archaeology. The school was conducted between January 9th - March 15th 2010. (See "ARCE Field School: Additional Funding under Cycle 5" on page 25) at a total cost of LE 1,488,119.

Year Seven Planned Activities:

Luxor Temple Roman Bastion: The project will continue the excavation started in the 2009-2010 season to expose and document the surviving Roman architectural remains, which have not previously been recorded in detail, in preparation for conservation and restoration. This will be undertaken by appropriate specialists from Chicago House in a future season. At the SCA's request, the excavations on the north side of the Roman wall will lower the ground level there to that of the rest of the temple enclosure, a depth of about 3 m. The deposits here are very important and need to be recorded in detail, as they are the last remaining levels from which it is possible to examine the relationship between the fortress and neighboring structures.

Implementation: March 2011 – June 2011.

Director: Aurelie Schenk, Chicago House

Objectives:

1. Excavate and record archaeological deposits to the north of the Roman wall.
2. Place excavated material on the south side of the mud brick wall to assist in stabilization.
3. Make a condition survey of the preserved architectural remains by photography and documentation.
4. Prepare detailed plans and elevations of the upstanding architectural remains and those exposed during the excavations.
5. Process all finds from the excavations.

Salvage Archaeology Field School: ARCE is considering the possibility of conducting, in collaboration with Dr. Mark Lehner (AERA) a study season in Luxor (January – March 2011) of objects found associated with the Salvage Archaeology Field School in the 2009-2010 season.

Rameses II Court Columns: During the 2010-2011 season, SCA conservators, under ARCE supervision, will continue to remove old soluble salt filled concrete repairs in columns.

Implementation: October 2010 – June 2011.

Director: Khadiga Adam Tho, ARCE

Objectives:

- 1) Desalination of lower 2 meters of columns where necessary utilizing salt absorbing clay material poultices and repeat as necessary.
- 2) Cleaning of the treated areas with brushes and cotton swabs.
- 3) Application of new lime mortar to lacunae and gaps in the columns, colored to blend with the appearance of existing original stone.

Estimated Budget for Luxor Emergency Intervention (Year 7): LE 1,231,682

Emergency Conservation at Karnak Temple

Statement of the Project: The effects of the groundwater lowering at Karnak Temple include salt efflorescence. No structural destabilization is evident at this time and monitoring is ongoing. Conservation intervention activities at Karnak Temple are included in the Emergency Intervention component of the Luxor East Bank Groundwater Lowering Project. ARCE's coordination effort between Chicago House, the Franco-Egyptian Centre (CFEETK) and the SCA has been successful.

Khonsu Temple, located at the southwest quadrant of the Karnak Temple complex, has been the focus based upon the needs of the assessment and the SCA has given permission for conservation to commence. Long ago, the Karnak enclosure exit was changed so that this temple was rarely visited. At the request of the SCA, ARCE has undertaken to provide better access for visitors and to repair, conserve and enhance the presentation of this important site.

Year 6 Results:

Conservation – Khonsu Temple Stonework: Between October 1, 2009 and June 30, 2010 the west wall and four columns in the main court of Khonsu Temple was cleaned by current and past ARCE Conservation Field School students. The contrast is astounding. Colors that have been covered by dirt and soot have reappeared through the process of cleaning. Visitors to the site have been able to imagine the appearance of what it originally looked like.

Conservation – Euergetes Gate: The gate in front of Khonsu Temple was erected by Ptolemy III Euergetes who ruled Egypt from 246 to 222 BCE. ARCE's conservation students started cleaning by focusing on the ceiling and the jambs. The result was the reappearance of many colors.

Conservation – Karnak Second Pylon - Hypostyle Hall Wall: The Second Pylon was in desperate need of desalination as the salts from the groundwater were damaging the stone. ARCE conservator, Christie Pohl, supervise a student crew in the removal of old cement patches, conducting necessary desalination techniques and re-patching where necessary using lime mortar. One of the methods used in desalination was a hiba poultice. Hiba clay is applied to the surface to draw out the salt. When the clay dries it is removed along with quantities of salt. The cost of the above-mentioned activities combined in Year 6 was LE 2,094,158.

Much stone masonry work was needed for structural repair as well at the Khonsu Temple. Between October 2009 and June 2010, stone conservator Dany Roy and his team, (ARCE), performed extensive repairs on the northwest section of the roof, including a gutter and spout, repointing roofing slabs, and installation of 15 square meters of new sandstone slabs. Approximately 120 square meters of new flooring was installed in the main court. Partial reconstruction of the remains of a contra chapel at the north exterior end of the Khonsu Temple was also completed. A new pathway leading from the entrance pylon to the rear chapel will give tourists easy access around the east side of the temple. The cost of the Stonework in Year 6 was LE 834,471.

Khonsu Epigraphy: The Epigraphic Survey (Chicago House) has held the concession for the epigraphic documentation of the inscribed wall surfaces inside and outside of Khonsu Temple at Karnak since 1924. Since then the ES has produced three volumes in its Khonsu Temple publication series that document the wall reliefs in the first court and hypostyle hall, and the rooftop graffiti. An architectural study of the monument has also been prepared for publication. All of the evidence indicates that the floor and foundation blocks of Khonsu Temple are from an 18th Dynasty Khonsu Temple added onto in the 19th Dynasty and later completely dismantled by Ramesses III. This material has never been noted before, and is a major contribution to the history of Karnak.

The Epigraphic Survey joined ARCE's project to provide an epigraphic documentation component whose primary objective was to document the reused material revealed by the preparatory cleaning before any new paving was installed. During the 2009-10 season, Chicago House recorded the exposed stone elements as a result of ARCE's activity associated with the roof work and the new flooring. A large portion of the exposed areas were almost inaccessible. The epigraphers overcame this by sliding aluminum foil in the joints between the stone slabs and utilizing a hand made tool. They then proceeded to obtain a rub of the fragment. This allowed them to then draw the impression to record the finding which provided additional information on the temples history. A preliminary report of the epigraphic work for the season was prepared entitled "Preliminary Report on the Work of the Epigraphic Survey in the Temple of Khonsu at Karnak, 2009-2010." The cost of this project in Year 6 was LE 289,558.

Talatat Project: The Pharaoh Akhenaten built his structures out of smaller blocks. Today they are referred as "talatat". This season saw the conclusion of field work for this project, which started in 2008-2009. Data base work is scheduled to finish in 2010-2011 season (Year 7).

Over 16,000 talatat blocks were removed from the magazine, cleaned and conserved, recorded, photographed and neatly restacked and covered on new mastabas. Some of the stacks were found in disarray due to fox burrows undermining the existing mastabas. New mastabas were constructed along with

new floor sections to discourage future fox burrows. Many structural repairs of the building were also made. The cost of this project in Year 6 was LE 2,107,829.

Year Seven Planned Activities:

Epigraphic Work at Khonsu Temple (Chicago House)

Implementation Schedule: October 17, 2010 to April 14, 2011

Project Director: Ray Johnson (Chicago House – University of Chicago)

Objectives:

- 1) Continuing epigraphic documentation of the reused, inscribed blocks and block fragments in the flooring and foundations wherever the ARCE stone work reveals them prior to any flooring work. Concentration this season will be the west side of the main court.
- 2) Record, number and catalog each inscribed element and place it in a data base.
- 3) Measure and hand copy or generate isometric drawings of each block.
- 4) Digital photography of all blocks.
- 5) Film photography of selected blocks.
- 6) Rubbing/tracing of selected inscribed blocks.
- 7) Project Director review the documentation of each block.

Khonsu Temple Conservation:

Implementation Schedule: July 15, 2009 to April 14, 2011

Project Manager – John Shearman

Walls are located in the Khonsu Main Court. ARCE expects completion of the Main Court patching in the 2010-2011 Season. Six SCA workers and one conservator supervisor. No field school graduates will work on this project. Instead, Karnak Temple workers who assist ARCE in other conservation related work will be employed, as they need additional method and documentation training.

A. Wall Patching

Objectives:

- 1) Remove old concrete repairs in the walls. Mechanically clean with scalpels, wooden implements and soft brushes where necessary to remove any salt concretions, loose dirt and dust.
- 2) Apply new lime mortar with the final layer colored to blend with the appearance of existing original stone.

B. Floor Patching

Objectives:

- 1) Remove existing sand, dirt and debris between and around the existing floor slabs.
- 2) Replace with sand/gravel and where necessary, new stone slabs.

C. Euergetes Gate

Objectives:

- 1) Apply additional conservation techniques upon the previously cleaned gate from last seasons' conservation field schools cleaning operation. This includes, but is not limited to the following:
 - i. Documentation before and after treatment (photography, condition reporting and mapping)
 - ii. Stabilization work (injections for detached plaster, mortar edging and grouting, filling of small cracks and larger gaps, additional consolidation).
 - iii. Removal of excess consolidant, mortar and white residue from the surface.
 - iv. Selected cleaning.
 - v. Classroom Instruction (selected lessons of field encountered applications and more advanced conservation techniques)

D. Lime Slacking Operaton

Lime slacking is the process of changing Quicklime (Calcium Oxide) into Slacked Lime (Calcium Hydroxide) which is a major ingredient used to produce lime mortar. The process involves

submersing quicklime into water where it breaks down to a slurry. The mixture is aged for a minimum of 3 months to allow for a consistent workable mixture. ARCE has set up two large mixing tanks to the East (behind) the laboratory. The slaked lime is placed in barrels for the aging process and used on site when matured.

Unlike cement, lime mortar is used because it is a weaker material than the stone (associated with patching) and thus will not cause damage to the stone through thermal expansion. It also is porous which allows moisture and salts to pass through to the surface where it can be removed. Unlike cement, it is easier to remove if necessary. The lime is mixed with sand and water to produce a lime mortar.

Objectives:

- To incorporate utilization of good material practices for the mixing and production of lime mortar.
- To develop field quality control programs and practices to determine the quality of the quicklime before the slacking process and the slaked lime before use in the mortar mixes and to find suppliers who furnish quality lime.
- To test various mortar mixes and mixing techniques to show the students the properties of the lime mortar and how variations of the ingredients can affect the lime mortar properties (ex., strength, porosity, segregation).

Although lime slacking operations and lime mortar patching work will continue throughout the summer of 2010, this is actually part of the 2010-2011 season.

Karnak Talatat Project:

Season: July 15, 2010 to April 18, 2011

Manager: Jocelyn Gohary

With the field work of the conservation and documentation of over 16,000 talatat blocks completed in the 2009-2010 Season, work is ongoing on the review and completion of the data base. The work is proceeding in Cairo and is expected to be completed in the 2010-2011 Season.

Objectives:

- 1) Review and consolidate all data for future publishing. Work involves completion of documentation and missing photography.

Estimated Budget for Karnak Emergency Intervention (Year 7): LE 3,050,118

Conservation of the Mut Temple Foundations

Statement of the Project: This project is a continuation of work begun under the extension of the EAP grant. The Conservation of the Mut Temple Foundations project will focus on the three supporting walls of the temple (north, west and southwest) and the walls of the temple's interior substructure. The temple's mud-brick enclosure wall will be conserved. The earth and stone foundations of the Mut Temple have subsided, in part due to the rise and fall of groundwater. In particular, a group of sandstone foundation blocks of the west wall have slipped out of place, thus endangering the entire west exterior and causing the crumbling of the adjacent north (front) wall of the temple. The west wall is an important historical monument as it bears a lengthy inscription that needs to be documented and preserved. This project will consolidate two exterior and several interior foundation walls and pave the interior space to replicate the original surface level and enable visitor access. Decorated fragments from a building of Hatshepsut that were reused in the foundations, will be retrieved, conserved and displayed on site. In addition, a series of Sakhmet statues will be excavated and reinstalled properly on impermeable bases so that they once more form part of a line facing the west wall of the temple. In combination with the Preservation of the Sacred Lakes project, the result of the EAC Add-on will not only be a preserved monument, but also an archaeological park that enhances the visitor experience of the Luxor antiquities.

Year 6 Results: Work was completed on this project in 2009-10. The west wall of the Mut Temple has been rebuilt with impermeable layers of brick and mortar placed beneath the wall. Part of the northern

perimeter wall of the temple porch was dismantled and decorated blocks were conserved and re-used in rebuilding the wall. A series of Sekhmet statues were conserved and set on mastabas for display and protection from rising damp.

Total Expenditures for Mut Temple Foundations: LE 3,065,349

Groundwater and Structural Monitoring

Statement of the Project:

The monitoring program includes a series of ongoing measurements intended to identify different types of movement of the temple structures. The measurements include:

- Measurement of the elevation of structures to identify whether structures are sinking or rising
- Measurement of distance between a group of temple structures to see if the temple structures are shifting in any direction
- Measurement of crack width and/or the tilting of temple columns.

The three (3) types of methods used to measure the above is as follows:

- Precise Level Measurement – is a measurement of the precise vertical elevation (relative to sea level) of a point fixed on an ancient structure.
- Total Station Measurement – combines horizontal and vertical measurements between groups of temple structures. In this method, several survey measurements are made between locations visible from a reference survey point. The resulting geometry calculation tells the monitoring program whether any of the temple structures in the group has moved relative to the other objects.
- Crack and Tilt Measurements – At selected places on temple structures, special sensors are installed to measure the tilt of a position from the vertical (within a certain plane), or the width of a structural crack. At these selected locations, tilt meters and crack meters were installed. The locations for these sensors were selected in consultation between archaeologists and the SCA.

Year 6 Results: ARCE entered into a contract with SMT Associates in early 2009 to provide additional observation on supplemental monitoring points in the Luxor Temple. ARCE performed the routine monitoring program, taking readings in both Luxor and Karnak Temples every three days, in conjunction with SMT Associates. The 2009-2010 Season continued the monitoring program and generated semi-annual reports. As of the last report, no significant movement or destabilization of the temple structures following startup of the dewatering systems at Karnak and Luxor Temples has been recorded or witnessed.

Year Seven Planned Activities: As per the Mod. No. 6 extension of the EAC Grant, this activity will continue to July 2011. ARCE will work with the SCA and SMT Associates to make recommendations related to how the monitoring program will be continued after its initial performance period.

Total Budget for Groundwater and Structural Monitoring (Year 7): LE 3,050,118

Preservation of the Sacred Lakes

Statement of the Project: This project commenced in April 2007 to address the problems of the groundwater lowering for the great sacred lake of Amun at Karnak Temple and the somewhat smaller sacred lake of Isheru at Mut Temple. The Karnak sacred lake is a focal point for tourists so water levels must be maintained.

The Mut Temple Sacred Lake is a natural refuge for wildlife but has been contaminated with chemicals and is now threatened by extinction due to the groundwater lowering project. The Mut lake will be the heart of the planned Mut Temple archaeological park. Its crescent shape forms a key element of the New Kingdom temple complex of the goddess Mut, which lies a short distance south of Karnak and is connected to it by a sphinx-lined processional way. This type of lake was known in ancient Egyptian as ‘*isheru*’, and was specifically associated with leonine goddesses. The Mut temple lake is the largest example of an *isheru* known in Egypt. It is of New Kingdom origin, and may have formed part of the original temple complex,

which seems to have been begun in the earlier part of the 18th dynasty under Hatshepsut and Tuthmosis III (roughly the middle part of the fifteenth century BC). The lake edges were revetted with stone walls, which were repaired and modified over a long period, at least until the time of the Ptolemies in the last centuries BC.

For both lakes, the stone enclosure walls, if appropriate, and ancient quays will be conserved and a system for holding the water inside the lake perimeter will be created.

Year 6 Results:

Karnak Sacred Lake

Before the Groundwater Lowering Project became a reality, the Sacred Lake at Karnak was normally refilled with Nile water. This caused a large weed buildup throughout the lake. ARCE shut off the Nile water and replaced it with cleaner groundwater. After removing the weeds, chemically treating and implementing a maintenance routine, ARCE handed the clean lake back to the SCA to maintain in April 2010.

Mut Sacred Lake:

The Sacred Lake at Mut Temple had many problems with weed infestation surrounding the lake and in the lake itself. During the 2009-10 season, ARCE staff led by Magdy Mokhtar with assistance from Betsy Bryan, developed test areas on the embankment to eliminate the weeds with the constraint of low maintenance after the weed removal. Although the testing is still ongoing, it seems that a thick plastic liner will eliminate weed regrowth on the embankment.

Unplanned activities:

Karnak Boat Ramp: During SCA excavations in front of the entrance to Karnak Temple a boat ramp was exposed. During the course of excavation, groundwater was encountered. The SCA requested dewatering pumps and during the 2008-2009 Season, two were placed in this area. During the 2009-2010 Season, the piping was completed and the pumps were placed on line which lowered the groundwater thus allowing the SCA to continue their excavation. The pumps were handed over to the SCA for monitoring and maintenance.

Karnak Nileometer: On the North side of Karnak's Sacred Lake is a long narrow structure running parallel to the side of the lake. This structure is a Nileometer, originally built by the Pharaoh Taharqo. Due to the structure being so close to the café at Karnak, trash and other debris has been deposited on the stairs and down in the lower part of the well. Complaints of foul odors were also expressed by the tourists to the SCA. ARCE cleaned out the structure and set up a sump pump with piping to Karnak's Sacred Lake to keep the well refreshed. To prevent further debris from being deposited in the structure, metal screening with wood frames was placed over the openings. The work was performed over the Christmas 2009 holiday.

Year Seven Planned Activities: Since Mut Lake is filled only by groundwater, arrangements still need to be made to provide proper circulation of fresh water, a relatively constant lake level and a weed abatement program. A liner profile, situated on the embankment and surrounding the lake, should substantially reduce or eliminate weed eradication maintenance. The liner will have a rough surface so that the possibility of sand covering slippage on the sloped embankment will be reduced.

Season: October 25, 2010 to June 30, 2011

Project Manager: Magdy Mokhtar

Objective:

- 1) Remove existing weeds surrounding the lake.
- 2) Install liner profile.
- 3) Drain the lake as far down as possible.
- 4) Remove any existing organic material.
- 5) Set up the means to circulate fresh ground water.
- 6) Chemically treat the water for plant eradication.
- 7) Allow the lake to fill up.
- 8) Hand over the completed work to the SCA.

Estimated Budget for Sacred Lakes (Year 7): LE 838,650

Field School for Architectural Conservators

Statement of the Project: Karnak and Luxor temple complexes are massive monuments with acres of decorated and undecorated stone. In order to be able to manage the long-term responsibility of preserving these monuments, the SCA requires institution building through training. ARCE's Field School for Architectural Conservators will result in the creation of a cadre of Egyptian conservators who have participated in the project from its inception and who will be taking the lead in conservation activities at the conclusion of the project. The purpose is to enable the conservation to continue after the lifetime of the project, thus ensuring a lasting legacy of the Luxor East Bank Groundwater Lowering Response Project. Topics of study would include inspection/analysis, assessment of intervention, treatments, documentation and publication.

Implementation Schedule: The field school was conducted over the past three years between October and June so that trainees will have participated in the entire conservation process upon completion of their training. Furthermore, by participating in various conservation projects led by professional conservators at all three temples during the duration of the Luxor East Bank Groundwater Lowering Response Project, trainees will experience a variety of different approaches in the face of real situations.

Year 6 Results: Between October 2009 and April 2010 the Conservation Field School conducted training for 26 SCA conservators (13 women and 13 men) in three locations: Khonsu Temple, where painted reliefs were cleaned, the Eurgetes Gate in Karnak Temple, where a masonry support was installed and the structure was cleaned and treated for smoke damage, and new mortar patching was applied on gaps in the wall. Training was also conducted in the Hypostyle Hall of Karnak Temple, where the western wall was desalinated and cleaned to remove dirt and dust. In addition to practical training during the 2009-2010 season, classroom instruction by consultants covered the following topics:

- 1- *Archaeological Illustration*
- 2- *Egyptology*
- 3 - *Adhesives, Consolidants and Solvents*
- 4 - *Geology of Egypt*
- 5- *Stonecutting and masonry*
- 6 - *Consolidation of stone,*
- 7 - *Salts and the mechanisms of salt decay, Clifford Price 2008&2009*
- 8- *Salt Induced Stone Damage and Treatment, Eric Doehne2010*
- 9 - *Conservation of small objects*
- 10- *Loss compensation*
- 11- *Total Stations (use, function and field application))*
- 12 - *Archaeological Photography*

Year Seven Planned Activities: This season a regular field school is not planned, due to lack of new students in the Luxor region. In lieu of classroom instruction, SCA conservators who attended ARCE field schools over the past three years will receive supervision and training in "advanced" techniques during field operations. It is planned for three groups of six (18) to participate and the SCA plans on replacing the groups two more times in this season so that 54 students will have received training in advanced field techniques.

Season: January 30, 2011 to June 30, 2011

Project Director: Christie Pohl

Objectives:

- 1) Apply additional conservation techniques upon the previously cleaned walls and columns from the past three years of the conservation field school. This includes, but is not limited to the following:
 - Documentation before and after treatment (photography, condition reporting and mapping)
 - Stabilization work (injections for detached plaster, mortar edging and grouting, filling of small cracks and larger gaps, additional consolidation). The ceiling and frieze at the top of the wall may require more extensive work.
 - Removal of excess consolidant, mortar and previously used cleaning solutions.

- Selected cleaning.
- Classroom Instruction (selected lessons of field encountered applications and more advanced conservation techniques).

Estimated Budget for Field School for Architectural Conservators (Year 7): LE 2,450,975

Luxor Conservation Center

Statement of the Project: The Luxor Conservation Center will be created to provide classrooms for training, a computer lab for data analysis, a conservation lab for antiquities that require in-house treatment, and storage facilities for monitoring equipment. The Center will become an integral component of the Luxor East Bank Groundwater Lowering Response Project and at the end of the project it will continue to be an invaluable resource center for the SCA's mandate to preserve the monuments of Luxor. The creation of the Luxor Conservation Center will provide a vehicle for sustained conservation of the monuments.

Year 6 Results: ARCE completed construction and equipping the lab in late 2008. The lab is a fully equipped modern facility with basic laboratory instruments from analytical balance to conductivity meter and microscopes. It also contains a fume hood to manipulate dangerous chemicals, an oven and a simple but affective system to produce distilled water, later used during conservation work, such as cleaning decorated stone surfaces. It is primarily used as a teaching space for the conservation field school where the trainees learn how to carry out basic conservation tests. Other uses include preparing material needed for conservation. The slacking of lime is important for the quality of the lime mortar. The operation is performed just outside the laboratory at the east end. The laboratory is also conceived to provide space, materials and equipment for other teams working in the greater Luxor area to carry out analysis or conservation work. Finally, it is planned to provide basic analytical capabilities in support of archaeological projects in Karnak.

In July 2009, ARCE recruited a manager to establish procedures, procure supplies for the conservation laboratory. The conservation center will also serve as a training venue for the field school, and for activities related to Karnak and Luxor conservation and archaeological work. It is anticipated that by that time, two conservators will be selected by the SCA to be trained as lab managers.

Year Seven Planned Activities:

Season: October 17, 2010 to June 30, 2011

Interim Laboratory Manager: Christie Pohl

Objectives:

- 1) To be used for classroom instruction (selected lessons of field encountered applications) described above and as a conservation center of the Karnak site where basic conservation tools and materials can be found.
- 2) Continue to provide proper instruction to the conservation field school trainees in the safe use and the proper cleaning and maintenance of the equipment, materials and chemicals used in and about the laboratory.
- 3) To insure the sustainability of this facility by combining field encountered issues with low-tech analytical laboratory methods.
- 4) To put in place documented procedures for the proper running of the conservation laboratory (basic health and safety manual, standardized analysis sample forms, etc.).
- 5) Train SCA personnel for laboratory takeover at the end of this season.
- 6) Maintain and document quality control of lime and mortar through laboratory testing.

Estimated Budget for Luxor Conservation Center (Year 7): LE 369,752

Signage

Appropriate visitor information will be installed at ARCE project sites throughout the Karnak and Luxor Temple complexes to provide an explanation of the work completed at each site, as well as proper acknowledgement of the cooperating agencies.

Year Seven Planned Activities:

Season: September 19, 2010 to July 14, 2011

Cairo Coordinator: Kathleen Scott

Luxor Coordinator: John Shearman

Objectives:

- 1) Generate draft summary information for final project signage at Khonsu Temple, Mut Temple and Luxor Temple.
- 2) Review and receive approval of the drafts from the following:
 - ARCE staff
 - USAID
 - SCA
 - Richard Fazzini and Betsy Bryan (Mut Temple)
- 3) Purchase signage
- 4) Install signage at SCA approved locations.

Costs for Signage in Year 7 is shared between the Luxor and Karnak Emergency Intervention budgets

Publication and Documentation

Statement of the Project: *In its request for an extension to the EAC Grant, submitted by ARCE to USAID in July 2008, three separate budget line items related to publication and archiving, and approved under the original grant, Modification 1, and Modification 4, were combined into one line item under Cycle 3, to simplify the grant budget. The budget includes salaries for the Publications Director (75%), Photographer/Designer (100%), Archivist (25%), and Librarian (25%), as well as subventions for book publication.*

Publishing the results of conservation and training programs remains an important goal. The vast amount of technical data and descriptive reports generated by both the Luxor East Bank Groundwater Lowering Response Project and the ARCE conservation projects funded in Cycles One, Two and Four will be invaluable to future generations both as an archive and as a series of published monographs detailing the project as a case study in conservation on a large-scale at one of the world's most significant ancient sites.

Additionally, the archaeological material discovered during the course of USAID's investment in the "Salvation of Karnak and Luxor Temples" groundwater-lowering project needs to be published for the benefit of scholars working in several different fields. This documentation activity will result in the production of an archived database containing the information collected and stored over the course of Project. It will also provide published materials including web-based archives, conservation training manuals in English and Arabic, and final published reports and case studies.

Year 6 Results: Research and writing began for the planned publication related to the conservation of Roman Wall Paintings in the Luxor Temple. Michael Jones and Dr. Susanna MacFadden will co-edit the book which is tentatively titled *The Art of Maintaining an Empire: Roman Wall Paintings in the Luxor Temple*. Contracts were signed with contributing authors and a proposal was sent to Yale University Press to gauge their interest in publishing the work. Yale has responded favorably and negotiations have begun to finalize a publishing contract.

Research and writing continued as part of the preparation for publishing a book on the conservation at the Red Monastery Church. The publication will be edited and primarily overseen by Dr. Elizabeth Bolman. A

timeline has been created for the writing process and various publishers are being considered, among them are Yale University Press and Dumbarton Oaks Press.

Year Seven Planned Activities: Work will continue on the preparation of a manuscript entitled *The Art of Maintaining an Empire: Roman Wall Paintings in the Luxor Temple*. Contributing authors will be writing chapters and the editors will work to pull the manuscript together with the end of 2011 as the projected date of completion of the manuscript. A publishing contract will be finalized with Yale University Press.

Work will become more concentrated on *The Red Monastery Church: Magnificence and Asceticism in Upper Egypt* edited by Dr. Elizabeth Bolman. Dr. Bolman and other contributors will work together during the year to further compile a manuscript. There are numerous contributing authors and each will be working on individual chapters or appendices. Contributing authors will be sent contracts that will specify dates of completion.

The final report received by ARCE from Dr. Melinda Hartwig on documentation and conservation of the Tomb of Menna will be reviewed by Michael Jones and Kathleen Scott. From this report, a manuscript will be developed for publication. ARCE hopes to present this manuscript for consideration to AUC Press in 2011.

Work will continue on documentation of conservation activities in Luxor and some of these may be published in the form of articles and monographs in ARCE publications such as JARCE or the Bulletin. The manuscript for *A Study of Artifacts Recovered during the Groundwater Lowering for Karnak and Luxor Temples Project* is being edited, but, to preserve the EAC publications budget for larger projects, this publication will be funded through other ARCE sources. The Aga Khan Cultural Trust has not indicated any interest in pursuing the publication with ARCE of the Aslam Silahdar Mosque conservation project and so the Director of ARCE has put this publication project on hold.

Estimated Publications Budget for Year Seven: LE 665,146

LUXOR WEST BANK AMENDMENT (CYCLE FOUR)
March 1, 2007 – July 14, 2009

Introduction

There are currently three expected outcomes under Cycle Four, as approved by USAID in Modification No. 3 to the EAC Agreement :

1. Salvage Archaeology Field School – Avenue of the Sphinxes;
2. Documentation of Existing Architecture, and Conservation of Decorated Ancient and Medieval Blocks ;
3. Publication.

A fourth outcome, “Archaeological Monitoring in the West Bank of Luxor” was included in this modification, in response to the proposed groundwater lowering project surrounding Medinat Habu and other temples on the West Bank. ARCE attempted to enter into discussions with CDM in 2008, during the design stage of the project, and presented an outline for the work of the monitoring project to USAID and the SCA. The CDM project went ahead without ARCE’s involvement. After negotiations with USAID and the SCA in March 2008, it was made clear by Dr. Zahi Hawass that this would be an “Egyptian project,” and that ARCE would not participate.

The Salvage Archaeology Field School and Documentation of Historic Buildings in Luxor were implemented between July 2007 and August 2008. Activities approved under Modification No. 4 for publication were consolidated with USAID’s various agreement modifications and are presented in a single Publications description in the Cycle Three section of this report.

Cycle Four Program Activity Descriptions

The following projects were approved for Cycle Four subproject implementation, commencing in Year Three (October 2006 – September 2007). The project descriptions on the following pages state results achieved.

Project Name	Principal Consultants	Location	Start / End Date	Status
Salvage Archaeology Field School – Avenue of the Sphinxes	Ancient Egypt Research Associates (AERA) Directed by Dr. Mark Lehner	East Bank, Luxor	Jan-08 / March-08	Completed
Documentation of Luxor’s Historic Buildings	Hampikian-Ibrashi, Architecture & Heritage Management	East Bank, Luxor	July-07 / Aug-08	Completed

Salvage Archaeology Field School – Avenue of the Sphinxes

Statement of the Project:

One of Luxor’s urban renewal activities currently underway is a project to restore the ancient Avenue of the Sphinxes running between Luxor and Karnak temples. In response to the SCA’s request for intensive training of local inspectors to enable them to deal with the increased demand for emergency archaeological and excavation interventions, ARCE implemented a Salvage Archaeology Field School in Luxor, aimed at training 30 Supreme Council of Antiquities inspectors. The location includes the Khaled Ibn el-Waleed Garden (KIW) and the current tourist bus parking lot to the north of Abu’l Muqashqish mosque and the police station (MPS).

Year 6 Results: The Salvage Archaeology Field School was completed as planned. A group of 26 Supreme Council of Antiquities inspectors was selected for participation in the twelve-week course (5th January 2008 – 27th March 2008) co-directed by Mohsen Kamel and Ana Tavares of AERA.

Classroom instruction and onsite supervision were conducted by 16 foreign teachers and 16 Egyptian site supervisors covering all aspects of modern standard archaeological practice including excavation and recording techniques, surveying, osteo-archaeology, archaeo-botany, zoo-archaeology, ceramics, illustration and report writing. Trainee's time will be divided over classroom sessions, independent reading and research, participatory topic presentations, and actual fieldwork in a controlled setting. The final three weeks were dedicated to archiving (two weeks), and report writing (one week).

Five excavation areas allowed the students to fully sample and record the archaeology of the KIW and MPS sites. Each area had one full-time archaeologist concentrating on salvage excavation and recording and one field school teacher-supervisor, who focused on teaching. An archaeological kit was provided to each student, including basic excavation and drafting tools.

The site yielded evidence of structures lying beneath the 30th dynasty sphinx bases and for the Roman and later stratigraphic sequence.

Total Expenditures: LE 2,477,526

Documentation of Luxor's Historic Buildings

Statement of the Project:

Two historic buildings lie in the path of the soon-to-be restored Avenue of the Sphinxes: the Abu'l Muqashqish mosque and the municipal police station, which is believed to have been built with ancient blocks. Prior to their imminent demolition, ARCE contracted with Dr. Nairy Hampikian & Dr. May al-Ibrashi to survey and record both buildings.

A third building, the Abul Hajjaj mosque, built within the Luxor Temple, was damaged by fire in 2006. In 2007, SCA renovation work removed plaster from interior walls, revealing the archaeology of the standing building. In response to an unprecedented opportunity to record this important structure, Dr. Hampikian and Dr. al-Ibrashi were given permission to undertake a building study of the mosque in collaboration with the SCA.

Implementation Schedule: Documentation of the Abul Muqashqish mosque documentation commenced in July 2007 and was completed in July 2008. The Abul-Hajjaj mosque project commenced in December 2007 and was completed in August 2008.

Year 6 Results: Documentation work on the **Abul Hajjaj Mosque** began with the exposure of the architraves and columns of the Ramessess II colonnades of the temple court. Documentation of the **Police Station** and **Abul Muqashqish Mosque** was delayed due to the fact that both sites were not vacated until mid-2008. Work started in July on the mosque, and the police station later. Final reports for both historic sites containing drawings, plans and photographic documentation were delivered in Year Five and are under review by ARCE.

Total Expenditures: LE 175,573

FURTHERING CONSERVATION AND TRAINING INITIATIVES (CYCLE 5)

July 15, 2009 – July 14, 2014

Introduction

There are currently five sub-projects approved under Modification No. 6 to the EAC Agreement. The project descriptions below describe accomplishments to date and planned activities under the EAC Program Plan for Cycle Five funding.

Project Name	Principal Consultants	Location	Start / End Date	Status
Conservation of the Red Monastery Church, Sohag (continuing from Cycle 2)	Dr. Elizabeth Bolman, Luigi De Cesaris & Alberto Sucato, Restorers	Sohag	Extended to July 2012	Ongoing *
ARCE Field School (continuing from Cycle 1)	Ancient Egypt Research Associates, Inc. (AERA)	Giza Plateau	Extended to December 2011	Ongoing *
Conservation of the Shunet al-Zebib, Abydos	Dr. Matthew Adams (New York University/Institute of Fine Arts)	Abydos (Sohag)	January 2010-March 2014	Ongoing
Creation of a Museum at St. Antony's Monastery	Fr. Maximous El-Antony	Red Sea, Egypt	January 2011-July 2012	Ongoing
Site Management in Historic Cairo	ARCE- managed	Cairo	July 2009 - July 2012	Ongoing

* Continued from previous cycles with additional funding

CONSERVATION OF WALL PAINTINGS AT THE RED MONASTERY: ADDITIONAL FUNDING UNDER CYCLE FIVE

Implementation schedule: Five additional campaigns of conservation within the church are scheduled for the period Fall 2009 (EAC Year 6) to Fall 2011 (EAC Year 8) after which final documentation will be conducted and brochures will be produced. Years 9 and 10 will be dedicated to the writing, designing and production of the book for publication by Yale University Press.

Year 6 Results: The sixth and seventh campaigns at Red Monastery, under EAC Cycle 5, took place in Year 6, during Fall 2009 and Spring 2010. In Fall 2009, conservation work continued on the right side of the façade, the Diaconicon vault (southeast corner room) and the northwest corridor wall. The decorated archway of the passage between the Prothesis and the north corridor was cleaned. In Spring 2010, conservation was carried out on the East Lobe of the Triconch and in the Diaconicon vault.

Year Seven Planned Activities: Conservation work planned for the Fall 2010 campaign includes the completion of the east semidome in the Triconch, the final section of the Façade wall (upper northern end), and most of the remaining areas of level I of the east lobe (all but the niches). The work in the semidome will most likely reveal primarily figural subjects executed on three distinct paint layers (second, third and fourth). On the enclosed section of the Nave wall (near the north end of the Façade wall) there is one more large ornamental cross from the medieval phase that remains to be cleaned, and work in the lower section of level I of the east lobe will probably reveal

a sequence of third phase *trompe l'oeil* curtains extending along the full length of the wall beneath the niches, a portion of which has already been revealed.

Conservation work for the Spring 2011 campaign includes the completion of the shallow dome above the northeast corner room, the medieval equestrian on the north wall of the nave, and the niches of level I of the east lobe of the tri-conch. Although half of the dome has already been cleaned, the painting of the equestrian will most likely expose a number of decorative elements that may help date the painting (and thereby the entire medieval phase). The niches of level I of the east lobe are so covered by grime that it is hard to predict what will be discovered once they are cleaned.

Estimated Budget for Red Monastery (Year 7): LE 3,095,602

ARCE FIELD SCHOOL: ADDITIONAL FUNDING UNDER CYCLE 5

Statement of the Project:

Under Modification No. 6, ARCE will offer three field schools to continue building a cadre of skilled archaeologists within the SCA.

Implementation schedule: Three field schools were planned for implementation in Giza from January 2010 to July 2011. However, due to an unplanned request by the SCA to hold a Salvage Archaeology Field School in Luxor during 2010, only two will be conducted in Giza. The first was completed in May 2010, and the second is scheduled for Fall 2011.

Year 6 Results: Responding to a direct appeal from the SCA in Luxor, a field school was organized in Luxor from January 9 to March 15, 2010 to train 32 SCA inspectors in salvage and rescue archaeology on the last remnants of the original Luxor town mound directly north of the Luxor Temple. The mound was scheduled to be demolished to the level of the surrounding area prior to any study. The remaining tell contained remnants of more than 2,000 years of history of life in old Luxor. Training components included site assessment, site survey and mapping, stratigraphic excavation, and recording archaeological deposits with drawing and photography. Of the total number trained, 7 were female.

A second field school took place (under Cycle 5) from March 20 to May 13, 2010, training 29 SCA antiquities inspectors in advanced publication and analysis. Of the total number trained, 8 were female. The goal of this Field School cycle was to enable SCA inspectors to practice all the stages of recording, analysing and publishing archaeological data. In the Advanced Field-Schools (2006 and 2009) and the 2008-2010 Salvage Archaeology Field Schools in Luxor, much progress was made practicing sampling strategies, for both sites and archaeological material, and in writing desktop assessments and reports. A series of lectures and seminars was held on basic research procedures, in addition to basic English grammar and writing. The group was broken down into 6 areas of study: excavation, osteology, graphics, ceramics, zooarchaeology and archaeobotany. The teams retrieved data from the GPMP archive and online database, as well as the library of the German Archaeological Institute in Cairo (DAIK), to create databases in their respective areas. The outcome of the APFS 2010 was a compilation of archaeological reports, over 250 pages long, ready for publication.

Year Seven Planned Activities: A Beginner's field school is scheduled for Fall 2011 (Year 8) at Memphis. A detailed budget and proposal will be submitted to ARCE in January 2011.

Estimated Budget for ARCE Field School (Year 7): LE 102,973

Conservation of the Shunet al-Zebib, Abydos

Introduction: With USAID's support, the Egyptian Antiquities Project began work in 2001 to preserve the funerary monument of King Khasekhemwy, which dates to 2750 B.C. It is the best example of Egypt's earliest tradition of royal mortuary building still standing today. Given that its thick walls still stand to near their original height of 11-12 meters. To date, approximately 50% of the 200-meter perimeter has been conserved using newly made mud bricks of the same size and materials as the original, to re-establish structural integrity that is in keeping with the original characteristics of the monument. Additional funding under Modification No. 6 enables New York University to complete stabilization and conservation of this enclosure, which is under threat of collapse, as evidenced by the World Monuments Fund including it on its 2008 Watch List of the World's 100 Most Endangered Sites.

Implementation Schedule: Work is scheduled over four seasons; each of approximately three months duration: Spring 2010 (Year 6), Spring 2011 (Year 7) and Spring 2012 (Year 8) and Spring 2012 (Year 9) of which three campaigns will be supported by the EAC Grant.

Year Seven Planned Activities: The team, consisting of mud-brick conservation experts, preservation architects, archaeologists, surveyor, structural engineer, photographer and draftsmen, will conduct the following activities:

Field Season 10, January – April 2011:

East wall, main enclosure

- i) complete stabilization of the upper part of the high standing northern part of the east wall
- ii) complete stabilization of the monastic cell voids in the interior side of the east wall
- iii) continue stabilization of the undermined interior side of the east wall
- iv) begin stabilization of the high standing southern part of the east wall

North wall, main enclosure

- v) continue comprehensive stabilization of the north gateway
- vi) complete stabilization of upper part of the north wall, interior side

South wall, main enclosure

- vii) continue comprehensive stabilization of the south gateway area
- viii) begin stabilization of undercut interior side of the south wall

West perimeter wall

- ix) complete stabilization of the exterior side of the west perimeter wall
- x) cap wall top, north and south halves

South perimeter wall

- xi) begin stabilization of the exterior side of the south perimeter wall

Estimated Budget for Shunet el_Zebib (Year 7): LE 1,771,574

Creation of a Museum at St. Antony's Monastery

Statement of the Project: St. Antony's Monastery on the Red Sea is perhaps the most important Coptic monastery in Egypt. With USAID support from 1996 to 1999, ARCE brought to light the unique wall paintings dating to two phases of work in the sixth and thirteenth centuries. The results of this project are published by Yale University Press in *Monastic Visions: Wall Paintings in the Monastery of St. Antony at the Red Sea* (2002), an illustrated book that presents these beautiful medieval paintings and the USAID-funded conservation program that brought them to light. With the additional funding provided under Modification No. 6, ARCE will build upon USAID's earlier investment at St. Antony's Monastery to enhance the visitor experience and tourism potential of the monastery through the creation of a museum.

The museum will inspire and strengthen understanding among various communities. The educational museum will enable foreign and Egyptian visitors to interact with real objects, supported by scholarship and knowledge, so as to expand their experience. Over the centuries, the monks have gathered a fine collection of decorative metal (e.g., chandeliers, chalices), icons as old as the sixteenth century, vestments from the seventeenth through nineteenth centuries, including those belonging to Pope Kirillos IV, and household objects of wood and pottery that document the daily life of the monks. These objects of faith and life need proper display and storage. Some also require conservation. The Monastery has made an initial investment of building renovations and display case construction. The ARCE project will provide expertise in exhibit design, textile and icon conservation, and curatorial training. A storyline for the museum will be developed and illustrative exhibit panels created so as to display the artifacts within context. Special artifact mounts will be created for the precious and fragile vestments so that they may be displayed safely. The project will include a training component so that the monks learn international standard techniques for the care and display of objects in their collection. The monks have worked to create a paper registry of their collection, and ARCE will computerize the data so that the monks, scholars and visitors might have easier access to the information. A brief informational brochure about the monastery's collection will be produced in Arabic and English to promote the museum and its goals. Directly above the museum, the monastery has built a workshop, which ARCE proposes to develop further as a conservation laboratory so that textiles and icons can continue to be conserved in the future. With such a resource, the monastery might become a center for the preservation of Coptic art.

Estimated Budget for St. Anthony's Museum (Year 7): LE 421,440

Site Management in Historic Cairo

Statement of the Project: Historic Cairo (also known as "Islamic Cairo") is an area universally recognized for its architectural and historic importance and is counted among UNESCO's World Heritage Sites. Yet this area attracts scant attention from visitors, with the only exception being the Khan el-Khalili bazaar. Since the 1980's, the Egyptian Ministry of Culture's Historic Cairo Project and the Supreme Council of Antiquities have worked ambitiously to conserve several historic and religious buildings in the area. Supporting the Egyptian government's efforts, organizations such as ARCE, the German Archaeological Institute and the Aga Khan Cultural Services-Egypt (AKCS-E) have also undertaken conservation projects in the area.

Since 1995, ARCE and USAID have preserved six monuments within close proximity to the Darb al-Ahmar. This strategy to conduct "area conservation" aims to achieve concentrated neighborhood impact, which will attract visitors, further investment and lead to the general upgrading of an entire area. With the Bab Zuwayla as the central landmark, ARCE conserved Bayt al-Razzaz, the Zawiya/Sabil of Farag ibn Barquq, the minbar and shops of the Mosque of al-Salih Tali'i', the Sabil of Nafisa al-Bayda, the Wikalat Nafisa al-Bayda and the Sabil of Mohammad Ali. These monuments are within walking distance from each other and cover a range of periods in Islamic history, making each of them unique in architectural style and function. The project will include final preparation of the Sabil Mohamed Aly Pasha for visitation by the public, and the development of a visitor orientation center at the Zawiya Farag Ibn Barquq. Handouts illustrating visitor walking routes will be produced, and signage will be installed, providing practical tourist itineraries with information panels along the streets of the Darb al-Ahmar district.

Implementation Schedule:

Year 6: Complete repairs and preparation of Sabil Mohamed Aly and Zawiyya Ibn Barquq for opening to the public.

Year 7: Produce a user-friendly map showing visitor's walking routes, with a large version to be installed on the prayer room wall at Zawiyya Ibn Barquq, and 10,000 small handouts for visitors.

Year 6 Results: In Year 6, preparation work on Sabil Mohamed Aly was completed, in readiness for a public opening ceremony. Toilets were installed for visitors, and repairs were made in the courtyard and roof to prevent further damage from water leakage. The site was officially handed over to the SCA in

March 2010. Work began on Zawiyya Ibn Barquq in June, 2010 and is scheduled to be completed by the end of summer 2010.

Estimated Budget for Site Management in Historic Cairo (Year 7): LE 520,927

Budget Explanation

The EAC Cooperative Agreement No. 263-A-00-04-00018-00 states under Article A.13.4, Advance Payment, that “One year’s worth of operation cost plus cycle funds will be disbursed in advance in two separate tranches. Further release of cycle funds will depend upon the grantee’s plan, subgrant completion and review and concurrence by the CTO.”

ARCE herein submits its budget and implementation plan for Year Seven of the EAC Grant, and requests approval for the release of Year Seven operating costs, plus the remaining program/cycle funds obligated under Modification No. 6 (funds remaining in the total current obligation are LE 452,619).

Grant Explanation

Modification No. 1, dated February 25, 2007, awarded an additional LE 50,200,000 to the EAC Grant and revised the program description, enabling ARCE to address the conservation needs of the Karnak, Mut and Luxor temple complexes following the implementation of the USAID-funded groundwater lowering system. The award included additional ARCE operating expenses, and funding for emergency interventions to be sub-granted for implementation by principal stakeholders (referred to herein as “Cycle Three”).

In its Year Three workplan (July 2006 – July 2007) ARCE requested USAID approval for a budget revision, submitting a detailed budget for its ARCE-managed Cycle Three Program. This followed after discussions with the USAID/Cairo program office during the period April – June 2007, during which it was agreed that ARCE would establish a financial monitoring system that allows reporting of progress on the five ARCE-managed activities in Luxor. Part of the costs in the Modification No. 1 OE budget were allocated to each specific ARCE-managed outputs.

In its Year Four workplan (July 2007 – July 2008), ARCE requested USAID approval for a budget revision which re-allocated funds within the estimated total budget amount. The budget requested LE 84,260,450 in program/cycle costs over the 5-year project and of LE 28,381,520 in administrative costs that are not specifically allocable to program outputs.

Modification No. 3 signed in July 2007, obligated an additional award of 211,084 to ARCE for mobilization of emergency archaeological monitoring and conservation training. This mobilization payment was, in effect, an indication of USAID’s intent to commit funds in response to a proposal submitted by ARCE for an expanded scope of work in the West Bank of Luxor and the Avenue of the Sphinxes on the East Bank.

Modification No. 4, signed in November 2007 awarded an additional LE 10,990,970 to ARCE for the above-mentioned activities. The award included additional ARCE operating expenses, and funding for emergency interventions to be sub-granted for implementation by principal stakeholders (referred to herein as “Cycle Four.”) Modification 4 did not include the requested budget revision.

On July 30, 2008, ARCE sent a proposal to USAID for furthering conservation and training initiatives by extending the EAC grant through July 2014. The proposal requested additional OE and program/cycle expenses – and increase of LE 36,609,183. **Modification 5, signed May 3, 2009**, which obligated LE 37,730,886 to the grant, also did not include the requested budget revision.

The budget revision requested by ARCE since June 2007 was included in **Modification No. 6, signed July 7, 2009** which extended the EAC Grant period to July 14, 2014, with an additional funding amount of LE

36,609,183, for the completion of large-scale conservation initiatives and continuation of successful training programs for SCA personnel. The award included ARCE operating expenses and funding for proposed activities to be sub-granted for implementation by principal stakeholders (referred to herein as “Cycle Five.”)

The following table lists modifications to the EAC Agreement, grant budget revisions, obligations and cash transfers to ARCE.

APPENDIX 1

Articles and Publications on ARCE Projects

1. “Egyptian Antiquities Attacked and Under Threat” – Ahram Online, (an article about thefts from the Egyptian Museum and other antiquities sites, which mentions the new EM Registration and Collections Management department.) March 3rd 2011
2. “Egypt’s Museums: High Hopes for Egypt’s First Institute of Museology” – Al Masry Al Youm, (an article about the SCA seeking funding for the creation of a new institute for museum training, which mentions ARCE as a potential partner) May 25, 2011
3. “Back to School for Museum Staff” – Al-Ahram Weekly (an article about the Egyptian Museum Registrars’ Training project) May 22nd, 2011
4. ARCE Conservation Update – 2011 (published by ARCE)

APPENDIX 2
TRAINING COMPLETED SINCE PROJECT INCEPTION
Egyptian Antiquities Conservation Project
Cooperative Agreement No. 263-A-00-04-00018-00

Course Title	Subproject Name	Location	Start Date	End Date	No. of Males	No. of Females	Total Participants
Beginners Field School #1	ARCE Field School for SCA Inspectors	Giza Plateau	Jan. 25, 2005	March 22, 2005	14	4	18
Apprenticeship Field School #2	ARCE Field School for SCA Inspectors	Giza Plateau	Sept. 29, 2006	December 22, 2006	22	10	32
Beginners and Advanced Field School #3	ARCE Field School for SCA Inspectors	Giza Plateau	Feb. 2, 2007	April 30, 2007	16	7	23
Advanced Field School #4	ARCE Field School for SCA Inspectors	Giza Plateau	Feb. 7, 2009	April 3, 2009	23	15	38
Avenue of the Sphinxes	Salvage Archaeology Field School #1	Luxor	January 5, 2008	March 27, 2008	19	7	26
Emergency Excavation of the Historic Mound north of Luxor Temple	Salvage Archaeology Field School #2	Luxor	January 9, 2010	MEXH 15, 2010	25	7	32
Advanced Publication and Analysis Field School #5	ARCE Field School for SCA Inspectors	Giza Plateau	March 20, 2010	May 13, 2010	21	8	29
Registrations and Collections Management Department (RCMD) Protocol	Egyptian Museum Registrars Training Project	Egyptian Museum, Cairo	August 1, 2006	January 31, 2011	1	9	10
VI European Registrars Conference	Egyptian Museum Registrars Training Project	Basel, Switzerland	November 9, 2008	November 12, 2008	0	4	4

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Egyptian Antiquities Conservation Project
Cooperative Agreement No. 263-A-00-04-00018-00

Course Title	Subproject Name	Location	Start Date	End Date	No. of Males	No. of Females	Total Participants
International Registrars Symposium	Egyptian Museum Registrars Training Project	Chicago, IL (USA)	November 5, 2009	November 9, 2009	0	3	3
EAC Conservation School for Architectural Conservators – Season #1	Luxor Groundwater Lowering Response Project	Luxor	September 1 2007	April 30, 2008	10	14	24
EAC Conservation School for Architectural Conservators – Season #2	Luxor Groundwater Lowering Response Project	Luxor	September 1 2008	April 30, 2009	10	16	26
EAC Conservation School for Architectural Conservators – Season #3	Luxor Groundwater Lowering Response Project	Luxor	September 1 2009	April 30, 2010	13	13	26

**APPENDIX 3
TABLE OF EAC PROJECTS**

Program	Sub-project	Principal Type of Project	Start Date	End Date	Address	Governorate	Subgrantee Contractor / Recipient	Budget In EGP
EAC								
Cycle One	ARCE Field School for SCA Inspectors (Season 1, 2, 3 & 4)	Conservation	01/25/05	04/03/09	Giza Plateau	Giza	Ancient Egypt Research Associates (Mark Lehner)	3,711,479.00
Cycle One	Marina el-Alamein Site Presentation	Conservation	06/01/05	31/12/07	Marina al Alamein	Matrouh	Agnieszka Dobrowolska	2,499,840.00
Cycle One	St. Anthony's Monastery Cells	Conservation	12/01/06	31/12/10	Kom El Shokafa	Red Sea	Father Maximous el-Antony	360,800.00
Cycles One and Two	Conservation of Roman Wall Paintings in Luxor Temple (Test Cleaning & Seasons 1 - 3)	Conservation	10/01/05	31/12/08	Luxor Temple	Luxor	Luigi de Cesaris & Alberto Sucato, Restorers	2,740,273.00
Cycles Two and Five	Documenation and Conservation of Wall Paintings at the Red Monastery in Sohag (Seasons 1 - 8)	Documentation and Conservation	11/01/05	Ongoing	The Monastery of St. Bigol	Sohag	Elizabeth Bolman	22,810,714.00

**APPENDIX 3
TABLE OF EAC PROJECTS**

Program	Sub-project	Principal Type of Project	Start Date	End Date	Address	Governorate	Subgrantee Contractor / Recipient	Budget In EGP
Cycle Two	Conservation of Aslam Silahdar Mosque (Agha Khan)	Documentation and Conservation	06/01/05	03/31/09	Darb Al-Ahmar, Cairo	Cairo	Agha Khan Cultural Services Egypt (Christophe Boleau)	3,453,705.00
Cycle Two	Documenation and Conservation of the Tomb of Menna, Theban Necropolis	Documentation and Conservation	04/01/07	12/31/09	West Bank (Theban Tombs)	Luxor	Georgia State University (Melinda Hartwig)	1,931,444.00
Cycle Two	Egyptian Museum Registrar Training	Training	12/17/06	Ongoing	Egyptian Museum	Cairo	ARCE (Janice Kamrin)	4,951,325.00
Cycle Two	Site Management Implementation at Marina al-Alamein	Site Implementation	03/03/07	05/31/07	Marina al Alamein	Matrouh	American Research Center in Egypt	457,540.00
Cycle Two	Site Management Implementation at Medinet Habu	Site Implementation	12/01/07	Ongoing	Medinet Habu	Luxor	American Research Center in Egypt	111,663.00
Cycle Three	Groundwater and Structural Monitoring	Conservation	04/01/07	Ongoing	Karnak Temple (East Bank)	Luxor	American Research Center in Egypt	3,585,005.00

**APPENDIX 3
TABLE OF EAC PROJECTS**

Program	Sub-project	Principal Type of Project	Start Date	End Date	Address	Governorate	Subgrantee Contractor / Recipient	Budget In EGP
Cycle Three	Preservation of the Sacred Lakes of Mut	Conservation	04/01/07	Ongoing	Mut Temple (East Bank)	Luxor	American Research Center in Egypt	4,625,173.00
Cycle Three	Conservation of the Mut Temple Foundations	Conservation	04/01/07	06/30/09	Mut Temple (East Bank)	Luxor	Johns Hopkins University (Betsy Bryan)	3,065,348.00
Cycle Three	Luxor Conservation Center	Training and Conservation Facility	04/01/07	ongoing	Karnak Temple	Luxor	American Research Center in Egypt (Elsa Bourginon & Chistie Pohl)	3,524,988.00
Cycle Three	Field School for SCA Architectural Conservators	Training	04/01/07	ongoing	Karnak Temple	Luxor	American Research Center in Egypt (Ed Johnson and Saied Abdelhamid)	8,949,185.00
Cycle Three	Emergency Intervention at Luxor Temple	Conservation	03/01/07	ongoing	Luxor Temple	Luxor	American Research Center in Egypt	5,314,080.00
Program	Sub-project	Principal Type of Project	Start Date	End Date	Address	Governorate	Subgrantee Contractor / Recipient	Budget In EGP

**APPENDIX 3
TABLE OF EAC PROJECTS**

Cycle Three	Roman Bastion	Conservation	10/1/09	06/01/11	Luxor Temple	Luxor	American Research Center in Egypt (Pamela Rose) & Chicago House (Aurelie Schenck)	112,093.00
Cycle Three	Pest Netting	Conservation	1/1/10	2/28/10	Luxor Temple	Luxor	American Research Center in Egypt (Ed Johnson)	13,400.00
Cycle Three	Rameses II Columns	Conservation	12/1/10	ongoing	Luxor Temple	Luxor	American Research Center in Egypt (Khadija Tho)	283,729.00
Cycle Three	Emergency Intervention at Karnak Temple	Conservation	04/01/07	ongoing	Karnak Temple	Luxor	American Research Center in Egypt	10,024,969.00
Cycle Three	Khonsu Walls	Conservation	04/01/08	ongoing	Karnak Temple	Luxor	American Research Center in Egypt (Christie Pohl)	767,653.00
Program	Sub-project	Principal Type of Project	Start Date	End Date	Address	Governorate	Subgrantee Contractor / Recipient	Budget In EGP

**APPENDIX 3
TABLE OF EAC PROJECTS**

Cycle Three	Euergetes Gate	Conservation	10/1/09	06/30/11	Karnak Temple	Luxor	American Research Center in Egypt (Christie Pohl)	415,160.00
Cycle Three	:Khonsu Stone Masonry	Conservation	10/1/09	ongoing	Karnak Temple	Luxor	American Research Center in Egypt (Danny Roy)	1,922,957.00
Cycle Three	Khonsu Epigraphy	Conservation	10/1/09	ongoing	Karnak Temple	Luxor	Chicago House (Ray Johnson)	885,458.00
Cycle Three	Karnak Second Pylon	Conservation	10/1/09	06/30/11	Karnak Temple	Luxor	American Research Center in Egypt (Christie Pohl)	344,985.00
Cycle Three	Talatat Project	Conservation	10/1/08	06/30/11	Karnak Temple	Luxor	American Research Center in Egypt (Jocelyn El-Gohary)	3,973,680.00
Program	Sub-project	Principal Type of Project	Start Date	End Date	Address	Governorate	Subgrantee Contractor / Recipient	Budget In EGP

**APPENDIX 3
TABLE OF EAC PROJECTS**

Cycle Four	Documentation of Abu'l Muqashqish Mosque and police station at Luxor	Documentation	07/10/07	07/31/08	Luxor	Luxor	Nairy Hampikian	63,213.00
Cycle Four	Documentation of Abu'l Hajjaj Mosque at Luxor	Documentation	12/05/07	08/31/08	Luxor	Luxor	Nairy Hampikian	112,360.00
Cycle Four	Salvage Archaeology Field School in Luxor	Training	07/10/07	03/31/08	Khaled Ibn al-Walid Garden - Avenue of the Sphinxes	Luxor	Ancient Egypt Research Associates (Mark Lehner)	2,477,526.00
Cycle Five	Shunet el-Zebib, Abydos	Conservation		ongoing	Abydos	Sohag	New York University, Institute of Fine Arts	4,155,139.00
Cycle Five	ARCE Field School for SCA Inspectors (Season 5, 6 & 7)	Training	10/01/09	ongoing	Giza Plateau, Memphis	Giza	Ancient Egypt Research Associates (Mark Lehner)	2,390,094.00
Cycle Five	St. Anthony's Museum	Conservation	01/01/11	ongoing	Ras Gharib	Red Sea	Father Maximous el-Antony	2,611,898.00
Cycle Five	Site Management in Historic Cairo	Conservation	07/01/09	ongoing	Darb al-Ahmar	Cairo	American Research Center in Egypt	1,238,207.00

APPENDIX 4

Site Visits and Presentations on ARCE Projects

Site Visits to ARCE/EAC Projects:

October 2010

- Visit to Historic Cairo by USAID Attorney General on October 19th, 2010
- Representatives from the ARCE Board of Governors visited Karnak and Luxor Temples on October 1, 2010

November 2010

- Visit to the Egyptian Museum Registrars' Training project by members of the USAID/Egypt Program Office on Nov. 2nd
- USAID Mission Director Jim Bever, Office Director John Irons and Project Management Specialist Sylvia Atalla visited Medinet Habu and Luxor Temple on November 8th. Emphasis was placed on the groundwater damage and the groundwater lowering program.

December 2010

- Jeff Novak, ARCE Membership Coordinator, visited Luxor on December 2nd through the 4th.
- Jim Bever, USAID Egypt Director, visited the Karnak Pump Station and discharge point, and our work at Khonsu Temple and Mut Temple on December 26th.
- Leslie Bromberg, ARCE Tucson, Arizona member, visited the work at Khonsu on December 31st.

January 2011

- A tour group from Toledo, Ohio visited Khonsu Temple and the laboratory on January 7th.
- John Irons, USAID Egypt Office Director and Sylvia Atalla Ishak, USAID Project Management Specialist visited the Karnak Pump Station and discharge point, and our work at Khonsu Temple and Mut Temple on January 10th.
- Dr. J. Patrick Greene, Chief Executive Officer of the Museum Victoria (Melbourne, Australia) visited Khonsu Temple and the laboratory on January 12th.
- Salima Ikram, AUC Professor and ARCE member and Otto Schaden, Egyptologist working on KV10 and KV63, visited Khonsu Temple and the laboratory on January 28th.

May 2011

- A delegation from USAID visited the ARCE Projects on May 3rd and 4th. Gerry Scott was present.
- A delegation from USAID visited the ARCE Projects on May 23rd.

Presentations by Michael Jones on USAID-funded conservation projects:

5 August 2010: Arabic Language Students Summer School: ARCE, Cairo.

12 September 2010: British Egyptology Congress; British Museum, London.

8 January 2011: Archaeological Institute of America Annual Meeting; San Antonio.

2 April 2011: ARCE Annual Meeting, Chicago.

7 April 2011: ARCE Chapter Memphis TN.

10 April 2011: ARCE Chapter Atlanta GA.

15 June 2011: Cairo Rotary Club; Conrad Hotel, Cairo.