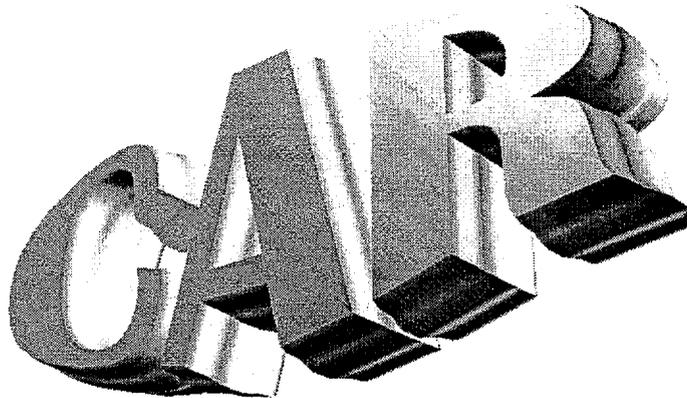




*American Embassy
Tel Aviv, Israel*

1997



Grant Agreement

*Israel Oceanographic & Limnological Research (Israel) &
Scil Res. Inst. Of Irrigation (Kyrgyzstan)*

TA-MOU-97-CA17-003



U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
BUREAU FOR GLOBAL PROGRAMS, FIELD SUPPORT & RESEARCH
CENTER FOR ECONOMIC GROWTH
Washington, D.C.

- 1 -

Embassy of the United States of America



*American Embassy
Tel Aviv, Israel*

May 3, 1998

Mr. Eyal Erez
Director of Administration
National Institute of Oceanography
POB 8030, Tel Shikmona
Haifa 31080
Israel

SUBJECT: Grant No. TA-MOU-97-CA17-003

Dear Mr. Erez:

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Federal Grant and Cooperative Agreement Act of 1977, and the Interagency Agreement between the Agency For International Development and the U.S. Department of State of December 15, 1997, as amended, the U.S. Embassy/Tel Aviv (hereinafter referred to as "*Embassy*" or "*Grantor*") hereby grants to Israel Oceanographic & Limnological Research (hereinafter referred to as "*IOLR*" or "*Grantee*") the sum of sixty one thousand three hundred thirty four U.S. dollars (\$61,334) to provide support for a research program entitled "**Ecological Effects of Human Activity on Lake Issyk-Kul (Kyrgyzstan)**" as more fully described in Attachment 2, entitled "Program Description", and the Grantee's proposal, as revised, which is made a part of the Grant and incorporated herein by reference.

This Grant is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives during the period beginning *May 1, 1998* and ending on or before *April 30, 2002*.

This Grant is made to the Grantee on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1, entitled "Schedule", Attachment 2, entitled "Program Description", Attachment 3, entitled "Payment Forms", Attachment 4, entitled "Performance Report - Guidelines", and Attachment 5, entitled "Mandatory and Required as Applicable Standard Provisions", which have all been agreed to by your organization.

In order to comply with regulations applicable to this Grant, it is essential that all documentation provided as attachments to this letter be thoroughly reviewed. The Grantee is responsible for full understanding of, and compliance with, all applicable regulations. However, in some cases, information set forth in the attached is subject to interpretation and warrants specific guidance. Such additional information is set forth below.

I. SUBGRANTS

Grants are being awarded to Prime institutions to work in collaboration with Sub institutions. Notwithstanding actual billing and payment procedures, the full Grant amount and research activity is formally attributed to the prime, or Israeli institution in this case. The only legal relationship the U.S. Government has is with the prime institution.

Provided with this Grant Agreement is a copy of a draft, sample format for your use in establishing a legal, binding relationship with the Sub or Developing Country (DC) Institution you intend to collaborate with. It is essentially identical to the award document made by the U.S. Government and complies with applicable regulations.

If the Grantee chooses to use its own format, care should be taken to ensure that required regulations have been applied. Subgrants may only be awarded to responsible institutions which possess the potential ability to perform successfully.

Since your institution will be held accountable for the grant in its entirety, it is important that the Subrecipient institution be held accountable by your institution. In this manner, the prime protects itself from unnecessary risk of disallowed costs.

However, in no case can a U.S. Government responsibility be claimed, construed, or inferred from the use of this or other Subgrant agreement by the Grantee.

II. AUDITS

In order to receive advance payments, all institutions (prime and sub) must have had a current audit performed by an independent external CPA firm in accordance with applicable regulations (i.e., those pertaining to the country where the institution is located as well as Government Auditing Standards developed by the Comptroller General of the United States). Any adverse findings contained in such audits, as determined by the Grant Officer or his designee, must have been adequately resolved. In the event an audit has not been performed recently, the Grantor (U.S. Government in the case of the prime, prime in the case of the sub) may elect to perform a limited financial review, conducted at the discretion of the Grantor, prior to authorizing advance payments. In this case, the Recipient of the advance must agree to comply with all future audit requirements.

III. STANDARD PROVISIONS

All Mandatory and Required as Applicable Standard Provisions indicated to be applicable in later sections of this Grant should be reviewed, understood, and adhered to. However, the following are considered to be most frequently applied to this program:

A. Revision of Grant Budget

In many cases, specific Grant Officer approval for budget changes is not required (if the need for a change is identified, the Grantee should refer specifically to the provision to determine whether or not Grant Officer approval is required). However, there may be other changes that should be discussed with the Project Officer, or his designee, to ensure continued agreement on the direction of the program. The Grantee should consider factors such as impact and reasonableness in determining which non-mandated changes should be brought to the attention of the Embassy. In no case will a change be approved which is contrary or detrimental to the original or detrimental to the objectives of the project as technically approved by the science review panel.

B. Air Travel and Transportation

Project Officer approval is required on all international travel. All air travel and shipments are to be made on U.S. flag air carriers when available. Exceptions to the requirement may be made if a U.S. flag air carrier cannot provide the foreign air transportation needed, or if use of such service will not accomplish the U.S. Government's mission (see circumstances outlined in the provision for specific allowable exceptions). Economic considerations do not override this provision. In the event U.S. flag carrier service is deemed to be unavailable, the Grantee must prepare and retain for audit purposes, a certificate of unavailability.

C. Procurement of Goods and Services

The Grantee must ensure high standards with respect to procurement. When possible, procurement should be competed to the maximum extent practicable. Technical needs should be determined, and all other factors being equal, purchase should be made at the lowest price available. Contracts meeting applicable thresholds should include appropriate legal remedies in case the subcontractor fails to perform. Wherever possible, the Grantee should use U.S. and small business sources.

D. Eligibility Rules for Goods and Services

The Grantee (and its Sub) may not purchase the following using U.S. Government funds: military equipment, surveillance equipment; police or other law enforcement commodities or services; abortion equipment or services; luxury goods or gambling equipment; or weather modification equipment.

The Grantee may not purchase from any source listed on the List of Parties Excluded from Federal Awards. To this end, the Grantee may rely on a self-certification provided by the supplier, unless there is any knowledge by the Grantee that the certification should not be accepted.

Specific prior, written approval from the Grant Officer is required prior to purchase of the following: agricultural commodities; motor vehicles; pharmaceuticals; pesticides; rubber compounding chemicals and plasticizers; used equipment; U.S. Government-owned excess property; or fertilizer. In the event the Grantee outlined a specific need for any of these goods in its proposal, and provided full disclosure of the reason, source, method of selecting the source, price comparisons, and other pertinent information, the Grantee may assume that approval of such specific goods is provided through award of this document. Any changes to requirements outlined in the proposal must be submitted for review and approval.

Also, attached is a partial list of authorized countries for acquisition of goods and services. In general, the order of preference is (1) U.S.; (2) Cooperating Country (i.e., country of location for prime and sub); (3) selected free world countries (see Code 941 countries, attached); and (4) special free world countries (Code 935, attached). These rules apply to source (place of purchase), origin (place of manufacture) and nationality (of supplier). When the Grantee uses other than U.S., documentation must be retained for audit purposes which indicates one of the following conditions: (1) procurement was of an emergency nature; (2) higher preference sources' prices are at least 50% higher; (3) impelling local political considerations preclude consideration of higher preference sources; (4) item is only available from the intended source; or (5) procurement from the identified source best promotes the objectives of the U.S. Foreign Assistance program.

IV. GRANT ADMINISTRATION AND CLOSEOUT

A. Responsibilities and Authority

1. Only the Grant Officer has the authority to modify the terms and conditions of this Grant. The Grantee must exercise care in considering various situations. In general, if any portion of the Grant must be changed to reflect the Grantee's intentions, the Grant Officer should be so notified, in writing with a copy to the Project Officer, or his designee. This correspondence should outline the change needed, the reason, and the impact (technical and financial), and should request approval to make such change.
2. The Project Officer, or his designee, is the Embassy's contact point for all issues not addressed to the Grant Officer. This includes, but is not limited to, technical clarifications, certain budget changes, voucher tracking, etc.

B. Closeout Procedures

1. The following definitions shall apply for the purpose of this section:
 - a. **Closeout:** The closeout of a Grant is the process by which the Embassy determines that all applicable administrative actions and all required work of the Grant have been completed by the Grantee and the Embassy.
 - b. **Date of Completion:** The date of completion is the date on which all work under the grant is actually completed, or the date on the award document, or any supplement or amendment thereto, on which the Embassy sponsorship ends.
 - c. **Estimated Completion Date:** The date contained in the Grant which is anticipated to be the "Date of Completion". This date may be modified to reflect delays or other reasonable circumstances which warrant extension of the time period. Requests for such revisions should comply with the above IV.A.1. requirements for Grant Officer approval, and should be submitted sufficiently (not less than 120 days) in advance of the estimated completion date contained in the Grant to permit evaluation and action prior to that time.
 - d. **Disallowed Costs:** Disallowed costs are those charges to a Grant that the Grant Officer determines to be unallowable, in accordance with the applicable Federal cost principles or other conditions contained in the Grant.

2. The following outlines specific requirements which must be met prior to initiation of the closeout process:
 - a. Upon request, the Embassy shall make prompt payments to a Grantee for allowable reimbursable costs under the Grant being closed out.
 - b. The Grantee shall immediately refund any balance of unobligated (unencumbered) cash that the Embassy has advanced or paid and that is not authorized to be retained by the Grantee for use in other Grants.
 - c. The Embassy shall obtain from the Grantee within 90 calendar days after the date of completion of the Grant, all financial, performance, and other reports required as the condition of the Grant. The Embassy may at its discretion grant extensions when requested by the Grantee.
 - d. When authorized by the Grant, the Embassy shall make a settlement for any upward or downward adjustments, to the Embassy's share of costs after these reports are received.
 - e. The Grantee shall account for any property acquired with funds provided herein or received from the U.S. Government, as discussed in Attachment One, Schedule.
 - f. In the event a final audit has not been performed prior to the closeout of the Grant, the Embassy shall retain the right to recover an appropriate amount after fully considering the recommendations on questioned costs resulting from the final audit.

Please sign all copies of this letter to acknowledge receipt of this Grant. Keep two copies for your files and one for the Principal Investigator, and return the **original** and all remaining copies to this office.

Sincerely,



William H. Crane
Grant Officer
American Embassy, Tel Aviv

Attachments:

No.	Title	Page
ONE	Schedule	9
TWO	Program Description	21
THREE	Payment Forms	27
FOUR	Performance Reports - Guidelines	35
FIVE	Mandatory Standard Provisions	45
	& Required as Applicable Standard Provisions	51

ACKNOWLEDGED:

DATE: _____

INSTITUTION: ISRAEL OCEANOGRAPHIC & LIMNOLOGICAL RESEARCH

AUTHORIZED INDIVIDUAL: _____ EYAL EREZ אײל ארז
DEPUTY DIRECTOR GENERAL סמנכ״ל

SIGNATURE: _____ *Eyal* _____ TITLE: _____

PRINCIPAL INVESTIGATOR: Prof. Boris Krumgalz DATE: _____

SIGNATURE: _____ *Boris* _____ TITLE: _____ Prof. _____

FISCAL DATA:

Proposal No.: CA17-003
 Appropriation No.: 19-80113
 Obligation No.: 4437897003
 Allotment No.: 4437
 Function Code: 8550
 Object Code: 4220
 Amount Obligated: \$ 61,334
 Total Estimated Amount: \$ 150,000
 Project Office: U.S. Embassy Tel Aviv, ECON/AID
 Voucher Paying Office: RAMC/PARIS

NUMERICAL LIST OF CURRENT AID GEOGRAPHIC CODESCode 935:

SPECIAL FREE WORLD

Any area or country in the Free World* including the cooperating country itself.

Code 941:

SELECTED FREE WORLD

Any independent country in the Free World*, excluding the cooperative country itself and the following:

Europe		Others	
Albania	Lithuania	Angola	Kyrgyzstan
Andorra	Luxemburg	Australia	Mongolia
Armenia	Macedonia**	Bahamas	New Zealand
Austria	Malta	Bahrain	Qatar
Azerbaijan	Moldova	Canada	Saudi Arabia
Belgium	Monaco	Cyprus	Singapore
Bosnia and Herzegovina	Montenegro**	Gabon	South Africa
Bulgaria	Netherlands	Hong Kong	Taiwan**
Belarus	Norway	Iceland	Turkmenistan
Croatia	Poland	Japan	United Arab Emirates
Czech Republic	Portugal	Kazakhstan	Uzbekistan
Denmark	Russia	Kuwait	
Estonia	San Marino		
Finland	Serbia**		
France	Slovak Republic		
Georgia	Slovenia		
Germany	Spain		
Greece	Sweden		
Hungary	Switzerland		
Ireland	Ukraine		
Italy	United Kingdom		
Latvia	Vatican City		
Liechtenstein			

* "Free World" excludes the following areas or countries:

Afghanistan, Cambodia, Cuba, Iran, Iraq, Laos, Libya, North Korea, People's Republic of China, Syria, and Viet Nam.

** Has the status of a "geopolitical entity", rather than an independent country.

Attachment One

SCHEDULE

A. Purpose of Grant

The purpose of this Grant is to provide support for the proposal entitled "**Ecological Effects of Human Activity on Lake Issyk-Kul (Kyrgyzstan)**", which is hereby incorporated by reference. This proposal was revised on *October 6, 1997*. All changes reflected in subsequent revisions are applicable to this Grant award.

B. Period of Grant

The effective date of this Grant is the date of the Grant Letter. The estimated completion date is *April 30, 2002*.

Funds obligated herein are available for program expenditures during the period *May 1, 1998*, through *April 30, 2002*.

C. Amount of Grant and Payment

1. The American Embassy, Tel Aviv, hereby obligates the amount of *\$61,334* for the purposes of this Grant.
2. Payment shall be made to the Grantee in accordance with the procedures as set forth in Attachment Four (4), Required as Applicable Standard Provision No. One, entitled "Payment - PERIODIC ADVANCE".
3. All financial reports required by this provision shall be identified by the Grant No. and the CDR Proposal No., and shall be submitted to:

**Office Of The Science Counselor
U.S. Embassy
71 Hayarkon Street
Tel Aviv 63903
Israel**

D. Grant Budget

The following is the budget for this Grant which includes local cost financing items, if authorized. Revisions to this Budget shall be made in accordance with the Mandatory Standard Provision of this Grant entitled "Revision of Grant Budget". Within the total estimated amount of this Grant, the Grantee may adjust the line items as may be reasonably necessary for the performance of the Grant program. Such changes require coordination with the Project Officer.

Element	Estimated Amount	
	I.O.L.R.	KYRGYZSTAN
Salaries	\$38,700	\$20,160
Equipment	\$3,600	\$17,600
Materials	\$6,565	\$11,500
Travel - Int'l	\$13,600	\$10,800
Travel - Local	\$0	\$3,900
Training	\$5,805	\$0
ODC	\$2,860	\$6,000
Indirect Costs	<u>\$3,870</u>	<u>\$5,040</u>
Sub-Total	\$75,000	\$75,000
Total	\$150,000	

In no event may the Grantee expend any amount above the obligated amount or the total estimated amount of this Grant, whichever is less. The U.S. Government is under no obligation to reimburse the Grantee for an amount in excess of the obligated amount.

E. Grant Participants:

Principal Investigator	Kyrgyzstan	Project Officer
Prof. Boris Krungalz Israel Oceanographic & Limnological Research POB 8030 Haifa 31080 Israel	Dr. A. Karmanchuk Sci. Res. Inst. Of Irrigation Dushanbinskaya Str. 4-a Bishkek Kyrgyzstan	Mr. William Crane Science Counselor American Embassy Tel Aviv Israel

F. Reporting and Evaluation

Reports, the Principal Investigator's responsibility, must be sufficiently detailed to substantiate the findings and to permit a scientific evaluation of the research. Overseas collaborators shall be given fair credit for their participation in the research and a chance to review and comment on the Final Report before it is submitted. The principal investigator will share a draft of the Final Report with the Project Officer and AID/G/EG for comments prior to the formal submission.

Distribution of specific reports is outlined in individual report specifications, below.

All references to AID/G/EG shall mean: U.S. Agency for International Development; Bureau for Global Programs, Field Support and Research; Center for Economic Growth; Room 2.11; Washington, D.C. 20523-2110.

All references to AID/PPC/CDIE shall mean: PPC/CDIE/DI, U.S. Agency for International Development, Room 6.07 -154, RRB, Washington, DC 20523-6701.

1. Performance Reports: Required every six months. (A short semi-annual report and a substantive annual report). The principal investigator will submit reports stating what has been accomplished to date and detailing project management issues. A Financial Status Report will be attached to each report. Reports are due within sixty (60) days after the end of each six-month period. Four copies of each report are to be submitted to AID/G/EG; one copy to the Project Officer; and one copy to the USAID mission in the country of the collaborator.
2. Final Performance Report: Within ninety (90) days after the estimated completion date of the Grant, the principal investigator will submit this report to the same recipients in the same quantities as specified above.

Publication of results in scientific journals is encouraged. Additional guidance on report preparation is given in the "Interim Guidelines on Projects", available from AID/G/EG.

Financial reports shall be in accordance with the applicable payment provision.

G. Special Provisions

1. While in the country of collaborating institutions, the Grantee will keep the USAID field mission generally apprised of their work, but will not request administrative support except for the usual in-country introductions as may be appropriate. The Grantee will abide by Mission and host government regulations and customs as they apply to other AID supported in-country activity.

2. The principal and co-principal investigators of the Grantee and its primary sub-grantee, and essential scientific staff which were identified as critical to the success of the program prior to award of this Grant will not be changed without the prior written approval of the Project Officer.
3. Mandatory and Required as Applicable Standard Provisions for Non-U.S. Non-governmental Grantees are set forth as Attachment 5 to this Grant.

4. Overhead Costs

As part of the application process, the Grantee has agreed to absorb all indirect costs associated with this program in excess of the following which was agreed upon:

Overhead may be charged to this grant at a rate not to exceed fifteen percent (10%) and ten percent (25%) of the Direct Labor for Israel and Kyrgyzstan respectively. This rate is considered fixed for the life of the Grant. If actual costs to the institutions are less than this ceiling rates, the Embassy shall only be requested to fund at the actual cost rates.

5. The title to all property acquired under this Grant will vest in the Grantee in accordance with applicable regulations contained herein. Property purchased for use by the collaborating institution shall vest in that institution. In light of the objectives of institutionalization within collaborating institution countries, equipment purchased for this use shall remain the property of that institution. Property titled to the Grantee shall be identified upon completion and disposition will be agreed upon. In general, the U.S. Government anticipates the transfer of this equipment to the Grantee if a valid continuation research activity is envisioned, particularly another under this CDR Program.
6. Compliance with Federal Guidelines and Regulatory Procedures:
 - a. The Grantee will implement this research activity in accordance with all relevant guidelines for U.S. Government funded research such as:
 - (1) The National Institutes of Health (NIH) guidelines for the ethical treatment of human subjects;
 - (2) Guidelines for the handling of radioactive materials;
 - (3) NIH and USDA guidelines for the handling of pathogenic microorganisms;

- (4) USDA-APHIS procedures for animal and plant health inspection;
- (5) NIH Guidelines for Research Involving Recombinant DNA Molecules;
- (6) Procedures issued by the USDA, EPA, or other appropriate federal agency, regarding testing of genetically engineered organisms;
- (7) State Department's and AID's environmental procedures; and
- (8) Such other Federal guidelines and procedures as may apply during the course of research.

- b. All existing comparable guidelines of the host country in which the research is actually located must be followed also.
- c. Reports submitted under this activity to U.S. Embassy/Tel Aviv and AID/G/EG will address the cited regulatory issues. All modifications of protocols affecting these regulatory concerns must be reported. The investigators are responsible for reporting any difficulties encountered in implementing these protocols.

7. Laboratory Safety and Hazard Containment:

Research will be conducted following the protocols described in the Grantee's proposal, as revised, which insure the safety of persons involved in the research. All research shall be conducted following procedures issued by the U.S. Government and those issued by the government of the host country for the containment of these hazards.

If the protocols involving laboratory safety and hazard containment are revised, they must be re-reviewed by the investigator's institutional review committee(s) that approved the original protocol, and the Project Officer and AID/G/EG must be informed in writing before the revised protocols are used. The revised procedures must be consonant with the guidelines of the country in which the laboratory is located and of the United States. Copies of the approval of the revised protocols by the investigator's institutional review committee(s) should also be provided the Project Officer and AID/G/EG.

Similarly, the research will be conducted in the facilities described in the Grantee's proposal, as revised. If the research is moved to new facilities, or the facilities are modified in such a way to affect safety or hazard containment, a description of the new facilities must be provided to the Project Officer and AID/G/EG before the research is effected. Any applicable institutional reviews of the facilities must be repeated, and the re-certification must be provided to the Project Officer and AID/G/EG.

8. Humane Treatment of Experimental Animals:
 - a. Principles for the Treatment of Vertebrates: The Grantee will adhere to the following principles for the utilization, care and transportation of vertebrate animals used in testing, research and training. For guidance throughout these principles, reference is made to the Guide for the Care and Use of Laboratory Animals prepared by the Institute of Laboratory Animal Resources, National Research Council.
 - (1) Procedures involving animals should be designed and performed with due consideration of their relevance to human or animal health, the advancement of knowledge, or the good of society.
 - (2) The animals selected for a procedure should be an appropriate species and quality and the minimum number required to obtain valid results. Methods such as mathematical models, computer simulation and in vitro biological systems should be considered.
 - (3) Proper use of animals, including the avoidance or minimization of discomfort, distress, and pain when consistent with sound scientific practices, is imperative. Unless the contrary is established, investigators should consider that procedures that cause pain or distress in human beings may cause pain or distress in other animals.
 - (4) Procedures with animals that may cause more than momentary or slight pain or distress should be performed with appropriate sedation, analgesia, anesthesia. Surgical or other painful procedures should not be performed on unanesthetized animals paralyzed by chemical agents.
 - (5) Animals that would otherwise suffer severe or chronic pain or distress that cannot be relieved should be painlessly killed at the end of the procedure, or, if appropriate, during the procedure.

(6)

The living conditions of animals should be appropriate for their species and contribute to their health and comfort. Normally the housing, feeding, and care of all animals used for biomedical purposes must be directed by a veterinarian or other scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied. In any case, veterinary care shall be provided as indicated.

(7)

Investigators and other personnel shall be appropriately qualified and experienced for conducting procedures on living animals. Adequate arrangements shall be made for their in-service training, including the proper and humane care and use of laboratory animals.

(8)

Where exceptions are required in relation to the provisions of these principles, the decisions should not rest with the investigators directly concerned, but should be made, with due regard to U.S. and host country regulations, by an appropriate review group such as an institutional animal research committee. Such exception should not be made solely for the purpose of teaching or demonstration.

- b. **Applicable Regulations:** The transportation, care and use of animals should be in accordance with the U.S. Animal Welfare Act (7 U.S.C. 2131 et. seq.) and other applicable U.S. Federal laws, guidelines, and policies. All research shall be conducted following procedures issued by the government of the host country for the humane treatment of experimental animals.
- c. **Compliance with Reviewed Protocols:** Research will be conducted following the protocols described in the Grantee's proposal, as revised, which insure the humane treatment of experimental animals.
- d. **Revision of Protocols:** If any protocol involving the experimental animals is revised, it must be re-reviewed by the investigator's institutional review committee(s) that approved the original protocol, and the Project Officer and AID/G/EG must be informed in writing before the revised protocol is used. The revised procedure must be consonant with the guidelines of the country in which the animals are affected, and of the United States. Copies of the approval of the revised protocol by the investigator's institutional review committee(s) should also be provided the Project Officer and AID/G/EG.
- e. **Facilities for Animals:** The animals will be maintained in the facilities described in the Grantee's proposal, as revised. All animals shall be provided facilities satisfying the requirements specified by the U.S. Government and those issued by the government of the host country for the humane treatment

of experimental animals. If the animals are moved to new facilities or the facilities are modified in such a way to affect the animals, a description of the new facilities must be provided to the Project Officer and AID/G/EG before the change is effected. Any applicable institutional reviews of the facilities must be repeated, and the re-certification should be provided to the Project Officer and AID/G/EG.

9. Human Subjects

Research will be conducted following the protocols described in the Grantee's proposal, as revised, which insures the well-being and informed consent of human subjects. It will also be conducted in accordance with the applicable procedures issued by the U.S. Government to insure ethical treatment of human subjects, and by those issued by the government of the host country in which the human subjects are to be involved.

If any protocol involving human subjects is revised, it must be re-reviewed by the investigator's institutional ethical review committee, and the Project Officer and AID/G/EG must be informed in writing before the revised protocol is used. The revised procedures must be consonant with the guidelines of the host country and of the United States. If the patient's informed consent form is revised, a copy of the new form must be submitted to both the Project Officer and AID/G/EG. A copy of the approval of the revised form by the investigator's institutional ethical review committee must also be provided to the Project Officer and AID/G/EG.

In addition and prior to commencement of any experimentation involving human subjects, the Grantee shall make a judgment and communicate the same to AID/G/EG as to whether the regulations, procedures or facilities of the country in question are adequate to ensure the safety and free and informed consent of the human subjects. In the event such judgment is that they are not, the Grantee, the Project Officer, and AID/G/EG will consult and agree on the protocol to be applied to insure the safety and free, informed consent of the subjects.

10. Containment and Safe Disposal of Animal or Plant Pathogens or Pests

Research will be conducted following the protocols described in the Grantee's proposal, as revised, which insure the containment and safe disposal of animal or plant pathogens. All research shall be conducted following procedures issued by the U.S. Government and those issued by the government of the host country for the containment of these pathogens or pests.

If any protocol is revised, it must be re-reviewed by the investigator's institutional review committee(s) that approved the original protocol, and the Project Officer and AID/G/EG must be informed in writing before the revised protocols are used. The revised procedures must be consonant with the guidelines of the country in which the laboratory is located and of the United States. Copies of the approval of the revised

protocols by the investigator's institutional review committees should also be provided to the Project Officer and AID/G/EG.

Similarly, the research will be conducted in the facilities described in the Grantee's proposal, as revised. If the research is moved to new facilities or the facilities are modified in such a way to affect safety or hazard containment, a description of the new facilities should be repeated, and the re-certification should be provided to the Project Officer and AID/G/EG.

11. International Shipment of Organisms, Biologicals, or Controlled Materials or Equipment Procedures for the international shipment of these materials must be in accordance with those approved in the permits cited in the Grantee's proposal, as revised. All such shipments shall be in compliance with International Import/Export Regulations for all countries to and from which regulated items are shipped. If the shipment procedures are varied from those specified for permits, permits for the revised procedures must be provided to the Project Officer and AID/G/EG before shipping commences.

12. Recombinant DNA

- a. Research will be conducted following the protocols described in the Grantee's proposal, as revised, which ensure the containment of recombinant organisms. If any such protocol is revised, it must be re-reviewed by the investigator's institutional review committee(s) that approved the original protocol, and the Project Officer and AID/G/EG must be informed in writing before the revised protocol is used. Copies of the approval of the revised protocol by the investigator's institutional review committees should also be provided to the Project Officer and AID/G/EG.

Similarly, the research will be conducted in the facilities described in the Grantee's proposal, as revised. If the research is moved to new facilities, or the facilities are modified in such a way to affect safety or containment, a description of the new facilities must be provided to the Project Officer and AID/G/EG before the research is effected. Any applicable institutional reviews of the facilities should be repeated, and the re-certification should be provided to the Project Officer and AID/G/EG.

- b. Notwithstanding the above:

- (1)

The Grantee and its subgrantees may not commence testing in any foreign location until written approval for testing is obtained from the Project Officer, AID/G/EG and the government of the country where testing is planned. Testing shall be conducted in accordance with all applicable regulations of that country.

(2)

In addition, however, and prior to commencement of any such testing, the Grantee shall make a judgement and communicate the same to the Project Officer and AID/G/EG as to whether the regulation, procedures or facilities of the country in question are adequate to ensure testing in an environmentally sound manner. In the event such judgement is that they are not, the Grantee, the Project Officer, and AID/G/EG will consult and agree on the conditions to be applied to the testing which will have such environmental effect.

(3)

Reports submitted under this activity to the Project Officer and AID/G/EG will address regulatory issues as above related to the activity.

13. Endangered Species

Research will be conducted following the protocols described in the Grantee's proposal, as revised, which insure the protection of endangered species. All research shall be conducted following procedures issued by the U.S. Government and those issued by the government of the host country for the protection of endangered species.

If any protocol involving these species is revised, it must be re-reviewed by the investigator's institutional review committee(s) that approved the original protocol, and the Project Officer and AID/G/EG must be informed in writing before the revised protocols are used. The revised procedures must be consonant with the guidelines of the country in which the species are to be affected, and of the United States. Copies of the approval of the revised protocol by the investigator's institutional review committees should also be provided the Project Officer and AID/G/EG.

In addition, however, and prior to commencement of any such activity which may affect an endangered species, the Grantee shall make a judgment and communicate the same to the Project Officer and AID/G/EG as to whether the regulations, procedures, or facilities of the country in question are adequate to ensure the protection of those species. In the event such judgment is that they are not, the Grantee, the Project Officer, and AID/G/EG will consult and agree on the conditions to be applied to the activity which will protect that species.

14. Environmental Hazards

Research will be conducted following the protocols described in the Grantee's proposal, as revised, which insure that there are no unacceptable environmental

hazards incident to the research. All research shall be conducted following AID and U.S. Department of State environmental guidelines and those issued by the government of the host country.

If any protocol involving environmental hazards is revised, it must be re-reviewed by the investigator's institutional review committee(s) that approved the original protocol, and the Project Officer and AID/G/EG must be informed in writing before the revised protocol is used. The revised procedure must be consonant with the guidelines of the country in which the research is located and of the United States. Copies of the approval of the revised protocol by the investigator's institutional review committee(s) must also be provided to the Project Officer and AID/G/EG.

In addition, however, and prior to commencement of any such activity which may create an environmental hazard, the Grantee shall make a judgment and communicate the same to the Project Officer and AID/G/EG as to whether the regulations, procedures or facilities of the country in question are adequate to ensure the protection of the environment. In the event such judgment is that they are not, the Grantee and the Project Officer and AID/G/EG will consult and agree on the conditions to be applied to the activity which will ensure environmental protection.

15. Intellectual Property Rights

Intellectual property rights stemming from the activities supported under this Grant will be apportioned as described in the Grantee's proposal, as amended. If the participants choose to modify that apportionment, the revised apportionment must be submitted to the Project Officer and AID/G/EG for approval before it takes effect.

Attachment Two

PROGRAM DESCRIPTION
(Technical Work Plan - excerpts)

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TECHNICAL WORK PLAN

1. The development of the database of the contamination of Lake Issuk-Kul.

At the first stage, a detailed database related to the contamination background (heavy metal, pesticides and other organic pollutants) of waters and sediments of the Lake Issyk-Kul watershed should be developed. This database should also include the assumed possible sources of pollutants in the area under study and the suggested paths of the pollutants' transport. This database will be developed using the existing experimental data. The data, missing for the development of the database, should be collected during the fulfillment of this project. The developed database will allow the formulation of a proper management decision policy related to the problem of anthropogenic pollution of the studied area.

2. Pinpointing the heavy metal pollutant sources with the "fingerprints" approach

The second stage will be devoted to the detection of heavy metal sources using the above-described "fingerprints" approach. We also intend to check this approach for the detection of the sources of organic pollutants in lake sediments. The strategy of the sampling procedure will be developed and sampling locations will be chosen after the above-discussed database will be created. The sediment samples in the chosen locations will be collected by a grab and in some places will also be taken by gravity cores. The sampling procedure and sediment treatment before analysis will be as those described in Krumgalz and Fainshtein (1991). The sediment fraction smaller than 250 μm (fine sand, silt and clay) will be analyzed for contaminants' content. The following parameters of the contaminated sediments will be measured: content of Hg, Cd, Pb, Zn, Cu, Al, Fe; total organic matter, oil products, phenols, detergents and pesticides content. The metal contents in sediment samples will be determined after sediment digestion at 140°C with concentrated nitric acid in Teflon-lined, high-pressure decomposition vessels according to Krumgalz and Fainshtein (1989). The total organic matter will be determined by the ignition loss procedure described by Galle and Runnels (1960) and Dean (1974), with slight modifications.

The determination of various heavy metals and other pollutants will be done by methods summarized in Table 4.

Table 4. Methods for the determination of heavy metals and other pollutants in the Issyk-Kul environment.

Pollutant	Method of determination^a
Phenols	Photometric
Detergents	Photometric
Chemical oxygen consumption	Bichromatic
Pesticides	Gaschromatography
Cu, Zn, Ni, Pb, As	Polyrography or AAS
Sb, Sn, Hg	Spectroscopy
Co, Mn	Photometric

^a The analytical methods are described in Semenova (1977).

3. Study of the paths of polluted sediment transport from the rivers flowing into Lake Issyk-Kul and the determination of the accumulation zones of polluted sediment by using fluorescent tracers.

Field experiments will be performed with luminescent tracers, by using sand grains taken from the channel bed and covered by luminescent film. The labeling process of the sand does not change the properties of the natural sediments and the hydrodynamic properties of the bed load. It was proved by laboratory tests that, for instance, the settling velocity of labeled particles in stagnant water remained similar with non-labeled sand. In order to receive the labeled sand, the portion of the sand taken will be treated in anthracene dissolved in chloroform, according to the procedure described by Shteinman and Imbar (1995). The coated grains reflect a bright luminescence under UV lamp excitation (Fig. 5). The best excitation wavelength was determined to be 350 nm and the detection interval to be 450-480 nm (Shteinman and Imbar, 1995).

The luminescent tracer (LT) experiment for the determination of sediment transport will be conducted by the following procedure: sand samples will be taken from the channel bed in the upstream of a river and after labeling by luminophor will be injected (by dropping the material from a boat) into the river channel. Sand samples will then be taken every 30 minutes in the downstream section along 100 m length of channel. The exact position of the sampling points will be determined by a theodolite. The sand transport will be studied by tracing the labeled sand in different locations from the injection point. The bottom sand samples will be dried and mixed for the uniform distribution of the luminescent tracers. A quantitative analysis of these sediment samples on a luminescent spectrometer will then allow us to conclude the patterns of sediment transport in the area under study.

A luminescent tracer- (LT) experiment, with tracers of different colors (up to five colors), injected in various locations suspected of having similar anthropogenic pollutant discharges, will be carried out. Such an experiment can allow us to distinguish the different sources of the same pollutants.

4. The proper recommendations for an operative management decision policy related to the prevention of the lake contamination by organic substances and heavy metals.

Time chart:

Period*	Activity**	Researcher
1 Jun 1997- 31 Dec 1997	Development of the database of heavy metals and organic pollution in Lake Issyk-Kul. Development of the strategy of sampling of the watershed area of Lake Issyk-Kul	Karmanchuk & Krungalz
1 Jan 1998 - 31 Dec. 1998	Sediment sampling of the watershed area of Lake Issyk-Kul and determination of the sources of heavy metals and organic pollutants in the Issyk-Kul watershed area by the "fingerprints" approach	Karmanchuk , Krungalz & Shteinman
1 Jan 1999- 31 Dec 1999	Study of the paths of sediment transport by using fluorescent tracers	Karmanchuk Krungalz & Shteinman
1 Jan 2000- 31 Jun 2000	Treatment of the obtained results; preparation of recommendations on steps to prevent pollution of Lake Issyk-Kul by anthropogenic contaminants; preparation of report and manuscripts	Karmanchuk , Krungalz & Shteinman

* If the project is to be funded from another starting date, all the time periods must be corrected accordingly.

** The limited funds will not allow us to buy all the required equipment for the laboratory of Dr. A.S. Karmanchuk. Therefore, some analytical analysis will be conducted in the laboratory of Prof. B.S. Krungalz.

*** The frequency of lake sampling will be decided during the first joint meeting.

Attachment Three

PAYMENT FORMS

Financial Reports should be made on a quarterly basis unless otherwise agreed to by the Grant Officer.

It is essential that the following forms be used when requesting Advance and/or Reimbursement type payments. No other forms will be accepted for payment processing.

Photocopy the forms for reuse.

PLEASE NOTE: *FOR ADVANCE PAYMENT, USE FORMS ON PAGES 29 AND 33*
FOR REIMBURSEMENT, USE FORMS ON PAGES 29 AND 31.

EACH SET OF FORMS MUST INCLUDE AN ORIGINAL AND ONE COPY.

If EFT (Electronic Funds Transfer) is requested, please provide the appropriate details, formatted according to accepted banking practices.

THANK YOU.

From (the Grantee): Israel Oceanographic & Limnological Research

REQUEST FOR PAYMENT

(Please submit one form per grantee, original and one copy)

To:
Mr. Boaz Ayalon
American Embassy Tel Aviv
ECON/AID Section
71 Hayarkon Street
Tel Aviv

____ Advance - Attached is Form W-245. The advance request is in accordance with the proposed work plan attached to the grant agreement.

____ Reimbursement - Attached is a duly signed Actual Disbursements Report.

(Please select one of payment type above)

Grant No.: _____

Voucher No.: _____

Period covering this request: from _____ to _____

Amount requested:

For IOLR: \$ _____

For Kyrgyzstan \$ _____

Please send payment to:

IOLR	Kyrgyzstan

Signed: _____ Name: _____

Title: _____

Date: _____

ACTUAL DISBURSEMENTS REPORT
 (Please submit original and one copy)

Grantee: ISRAEL OCEANOGRAPHIC & LIMNOLOGICAL RESEARCH

Grant Number: TA-MOU-97-CA17-003

Period covered by this report: from _____ to _____

Budget Line Item	Budget		Disbursements this Period		Cumulative Disbursements	Balance
	I.O.L.R.	KYRGYZSTAN	I.O.L.R.	KYRGYZSTAN		
Salaries	\$38,700	\$20,160				
Equipment	\$3,600	\$17,600				
Materials	\$6,565	\$11,500				
Trave - Int'l	\$13,600	\$10,800				
Travel - Local	\$0	\$3,900				
Training	\$5,805	\$0				
ODC	\$2,860	\$6,000				
Indirect Costs	\$3,870	\$5,040				
Total Expenses	\$75,000	\$75,000				

Comments:

1. Please attach a separate Request For Payment Form for each grantee!

Note: All amounts in U.S. Dollars (\$)

The undersigned hereby certifies: (A) that payment of the sum claimed is proper and due and that appropriate refund to AID will be made promptly upon request in the event of disallowance of costs not reimbursable under the terms of the agreement; (B) that information on the fiscal report is correct and such detailed supporting information as AID may reasonably require will be furnished promptly to AID on request; (C) that all requirements called for under the agreement to date of this certification have been met.

BY: _____
 TITLE: _____
 DATE: _____

FEDERAL CASH ADVANCE STATUS REPORT
(Report Control No. W-245; please submit original and one copy)

Grantee: **IOLR**

Grant No. TA-MOU-97-CA17-003

A. Period covered by this report: from _____ to _____ Grant Termination _____

Period covered by the next report: from _____ to _____

B. Cash Advance Use and Needs: (all in US dollars)

- 1. Cash advance on hand at the beginning of this reporting period \$ _____
- 2. U.S. Treasury check advance(s) received during this reporting period \$ _____
- 3. Interest earned on cash advance during this reporting period \$ _____
- 4. GROSS cash advance available during this reporting period (lines 1,2, &3) \$ _____
- 5. LESS, interest remitted to AID during this reporting period \$ _____
- 6. NET cash advance available during this reporting period, including subadvances \$ _____
- 7. Total disbursements during this reporting period, including subadvances (Footnote 1) \$ _____
- 8. Amount of cash advances available at the end of this reporting period (Footnote 2) \$ _____
- 9. Projected disbursements, including subadvances, for the next reporting period (Footnote 3) \$ _____
- 10. Additional cash advance requested for the next reporting period \$ _____
- 11. Total interest earned on cash advance from the start of the grant to the end of this reporting period, but not remitted to AID \$ _____
- 12. Total cash advance to subgrantee, if any, as of the end of this reporting period \$ _____

* Footnotes

- 1. The Grantee shall submit a cumulative detailed report of disbursements by BUDGET Line item quarterly.
- 2. If the amount of disbursements in 7 is equal to or more than the advance amount in 6, the total must be '0'!
- 3. The Grantee shall attach a Summary, by BUDGET Line item, of its projected disbursements for the next reporting period.

C. Certification

The undersigned hereby certifies: (1) that the amount in paragraph B.9 above represents the best estimate of funds needed for the disbursements to be incurred over the period described, (2) that appropriate refund or credit to the grant will be made in the event of disallowance in accordance with the terms of the grant, (3) that appropriate refund or credit to the grant will be made in the event funds are not expended, and (4) that any interest accrued on the funds made available herein will be refunded to AID.

BY: _____

TITLE: _____

DATE: _____

Attachment Four

Performance Reports
-Guidelines-

INTERIM GUIDELINES ON PERFORMANCE REPORT PREPARATION FOR CDR PROJECTS

GENERAL COMMENTS

Although reports are to be written by the Principal Investigator (P.I.), they should reflect issues from all project institutions involved in the research. Each report should be written in English and should be submitted according to the Grant Agreement, starting 8 months after the project start date..

All performance reports are reviewed, for AID/W, by experts (e.g. NAS/BOSTID). Unpublished research results and data in Management and Annual Report are treated confidentially by the reviewers.

A.I.D. uses general descriptions of project accomplishments in various publications to highlight successes in the program. Thus, information the Final Report is not considered to be confidential unless the P.I. justifies why it should be.

New products or processes which result from the U.S.-Israel Cooperative Development Research Program (CDR) projects often are most successfully dissemination if proprietary rights are established and commercial channels are used. Confidentiality of such information will be respected until patents are filed (guidance on patents is provided in A.I.D.'s Handbook 13 or Series 300).

Distribution of specific reports is outlined in individual report specifications, below.

1. AID/G/EG: U.S. Agency for International Development; Bureau for Global Programs, Field Support and Research; Center for Economic Growth; Room 2.11; Washington, D.C. 20523-2110. Two copies.
2. In addition to AID/G/EG, the grantee shall submit reports to all the participating USG Offices referred to in Attachment One, Page 11. Each Office will receive one copy, unless the Grantee is otherwise directed.
3. USAID mission in the country of the collaborator. One copy.

Types of Reports

Three types of performance reports are required: The **Management Report (Semi-Annual report expected within 60 days after the end of the first six months of each year in the grant period)** very briefly highlights project activities and constraints. The **Annual Report (expected within 60 days after the end of each year in the grant period)** is a more detailed description of progress during the year. The **Final Report (expected not later than 90 days after the end date of the grant period)** summarizes all of the project's accomplishments.

MANAGEMENT REPORTS

The purpose of the Management Report is briefly to advise Embassy Tel Aviv and A.I.D/W of overall project progress and to report constraints to project productivity. Length should be 2-5 pages plus cover page and any attachments.

Cover Sheet

Be sure to indicate the time Period covered by the report as well as the time covered by the project.

Body of Report

The report should include the following sections:

1) Scientific Summary: A one paragraph summary of scientific progress Briefly discuss progress since last report.

2) Scientific Issues: Identify unexpected needs for consultants, training, etc. In view of preliminary results, is there a need to restructure the project or budget? If so, explain.

3) Managerial Issues: Briefly discuss project managerial issues that have arisen in the last six months including budgetary concerns, staff changes, timetable changes, or research site changes. Changes in the budget (10% or more) should be justified. If the project schedule has changed, include revised schedule with brief rationale.

4) Special Concerns: Have any protocols which address special concern (e.g., human subjects, shipment permits, intellectual property rights etc.) changed? Attach any relevant documents, such as revised consent forms or patent disclosures.

5) Collaboration, Travel, Training and Publications: Briefly describe collaborative activities. Provide a list of completed travel and training since the last report, Indicate who was involved, and when a where activities occurred. Describe activities, including travel, anticipated in next 6 months. Provide citations for project publication that have appeared since the last report.

6) Request for American Embassy Tel Aviv or A.I.D. Actions: Indicate how American Embassy Tel Aviv or AID/G/EG staff might assist in promoting project productivity.

NOTE: The Management Report should not include in-depth discussions of results, publications, or budget summaries. It should instead focus on factors that administratively affect the conduct of research and project operations. The first Management Report should explain issues that develop when beginning the project. Subsequent Management Reports may quite brief if work is progressing according to plan, and no particular issue requires review or assistance.

ANNUAL REPORT

The purpose of the Annual Report is to summarize significant SCIENTIFIC results (Section I) from the previous 12 month's work, and to describe advances in SCIENTIFIC capabilities in developing countries. Managerial issues (Section II) that have arisen in the last six months should also be described. Annual Reports should be 5-10 pages long plus Cover Sheet.

Describe in detail any significant changes in the project.

Contents

Annual Reports should include the following sections:

Cover Sheet: Be sure to include all pertinent dates.

Table of Contents.

Executive Summary: Typed double-spaced on a separate page. No longer than one page. Use non-technical language. Describe purpose of project. Briefly describe the findings over the last year, and explain how these findings contribute to project objectives and to international development. Clearly describe the nature of collaboration during the last year.

The Executive Summary is extremely important. It is the section of the report which policy makers use to assess the impact of A.I.D. research programs. Write the Executive Summary so that the content is clear and concise.

Section I

Note on Publications: A.I.D. encourages P.I.s to publish data in SCIENTIFIC journals. Such publications should be submitted as part of the Annual Report, and can serve to replace, in whole or in part, Sections A and B (below).

The following Acknowledgment should be included in project-funded publications: "This research was supported (in part, if applicable) under Grant No. _____ Program in Science and Technology Cooperation (or U.S.-Israel Cooperative Development Research Program, whichever applies), Economic Growth, U.S. Agency for International Development."

A) Research Objectives: A brief statement of project objectives. Do not include unnecessary background, history, or literature review. Focus objectives since last Annual Report.

B) Research Accomplishments: Provide descriptions of results that are supported, if needed, with a few key tables and/or photos (preferably glossy black and white). Data should be clearly presented. If results have been published, attach reprints as appendices. Describe any project products or procedures that have been patented. Focus on accomplishments since last Annual Report.

C) SCIENTIFIC Impact of Collaboration: How have collaborating Scientists participated in the project during the reporting year?

D) Description of Project Impact: Are results from the project being used? If so, how? If not, what are the anticipated uses?

E) Strengthening of Developing Country Institutions: Describe any project investments such as facilities, equipment or training that have been made. Summarize new research or managerial skills that have been acquired. Describe efforts to overcome institutional constraints.

F) Future Work: What remains to be done? Is the project on schedule? Has the work plan been revised? If so, describe revision.

Section II

A) Managerial Issues: Describe any project managerial issues that have arisen since the last Management Report.

B) Budget: Describe and justify major changes (10% or more in budget items) to budget.

C) Special Concerns: Have any protocols which address special concerns (e.g. human subjects, intellectual property rights, etc.) changed? Attach any relevant documents, such as revised consent forms or patent disclosures.

D) Collaboration, Travel, Training and Publications: Briefly describe collaborative activities. Provide a list of completed travel and training since the last report. Indicate who was involved, and when and where activities occurred. Describe anticipated activities in next 6 months. Provide a list of project publications that have appeared since the last report.

E) Request for American Embassy Tel Aviv or A.I.D. Actions. Indicate how American Embassy Tel Aviv or AID/EG staff can assist in promoting project productivity.

FINAL REPORT

The purpose of the Final Report is to link all findings from the project so that the overall effectiveness and impact of the entire project can be assessed. Project effectiveness should be discussed both in terms of SCIENTIFIC accomplishments and relevance of findings to international development.

Information in Final Reports may be published by A.I.D. in non-technical publications.

The Final Report should not be a repetition of Annual Reports-. It is an overview of accomplishments from the entire project. The Final Report generally should be 10-25 pages long, and should include the sections below.

1) Cover Sheet: See example on page 8. Be sure to clearly specify the dates over which the project was conducted.

2) Table of Contents.

3) Executive Summary: Separate page. Use same guidelines as for Annual Report, but review and summarize the entire project. The Executive Summary should clearly place project accomplishments in the overall context of international development. What skills or awareness will remain in the developing country as a result of the project?

4) Research Objectives: Describe why your project was conducted. What problem was addressed and why is the problem important to development? Briefly describe how the project fits into on-going research by other SCIENTISTS, and reference pertinent literature. Describe the innovative aspects of the project. Briefly explain how other organizations supported the project.

5) Methods and Results: Summarize how data were collected. Present data through use of tables, charts, photographs (black and white, glossy). When appropriate, data should be statistically analyzed. This section should be presented as if for publication in a journal.

NOTE: All P.I.s should publish their results in SCIENTIFIC journals. Publications in peer-reviewed international journals provide important support for researchers seeking new funding from A.I.D. and other agencies. Such publications should be submitted as part of the Final Report; briefly describe the published results and refer to specific publications.

The following statement should be included in project-funded publications: "This research was supported (in part, if applicable) under Grant No. _____ Program in SCIENCE and Technology Cooperation (or U.S.-Israel Cooperative Development Research Program, whichever applies), Economic Growth, U.S. Agency for International Development."

4) Impact Relevance and Technology Transfer: How will findings be useful in the developing country? Describe the project's impact on individuals, laboratories, departments, and institutions. Will results be used? If so, how, by whom, when? Are larger scale trials warranted? What difference has the project made; now that the project is complete, what new capacity, equipment or expertise will be left behind in the developing country? How have the SCIENTIFIC capabilities of collaborating country SCIENTISTS been improved?

7) Project Activities/outputs: List meetings attended and held for entire project. List training, publications, patents for entire project.

8) Project Productivity: Did the project accomplish all of the proposed goals? If not, why not?

9) Future Work: Will project lead to future work? Describe.

10) Literature Cited.

Cover Page Format

MANAGEMENT [or ANNUAL or FINAL] REPORT

Covering Period: [Date to Date]

Submitted to the U.S. Agency for International Development; Bureau for Global Programs,
Field Support and Research; Center for Economic Growth

[TITLE OF PROJECT]

Principal Investigator: [Name]
Grantee Institution: [Name]

Collaborator: [Name]
Institution: [Name]

Project Number: [such as CX-YYY]
Grant Number: Such as TA-MOU-9X-CXX-YYY

Grant Project Officer: [Name]

Project Duration: [Date to Date]