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CLASSIFICATION
 PROJECT EVALUATION SUMMARY (PES) - PART I

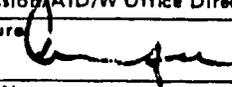
1. PROJECT TITLE Energy Conservation and Resource Development Project Mini Hydro Component	2. PROJECT NUMBER 517-0144	3. MISSION/AID/W OFFICE USAID/DR/CRD/EGY Dominican Republic
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 86-02-C	
<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING A. Total \$ 23,800,000 B. U.S. \$ 17,532,000	7. PERIOD COVERED BY EVALUATION From (month/yr.) 4/82 To (month/yr.) 4/84	
A. First PRO-AG or Equivalent FY 82	B. Final Obligation Expected FY 86	C. Final Input Delivery FY 87		Date of Evaluation Review	

B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
a) USAID/DR should improve the function of project monitoring.	W. Smith	July, 1984
b) COENER should improve administrative and logistical support to the project.	W. Smith	July, 1985
c) INDRHI and CDE, together with COENER, should develop a plan for institutional future of the project group.	W. Smith	July, 1985
d) The Harza contract should be amended to 1) extend the services by one year; 2) to allow charges for services rendered in Chicago as well as modifications relating to deliverables and schedules; and 3) to undertake a training needs study and to structure a more formal technical training activity within the project.	W. Smith	July, 1985
e) Establish a training plan and allocate resources to implement the component, with links to a University, to CDE, to INDRHI.	W. Smith	July, 1985

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT	
<input checked="" type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input checked="" type="checkbox"/> Other (Specify) Implementation Letter	A. <input checked="" type="checkbox"/> Continue Project Without Change	
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	<input type="checkbox"/> Other (Specify)	B. <input type="checkbox"/> Change Project Design and/or	
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C		<input type="checkbox"/> Change Implementation Plan	
<input checked="" type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P		C. <input type="checkbox"/> Discontinue Project	

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)		12. Mission/AID/W Office Director Approval	
Ing. William H. Smith, CRD Energy Officer Ing. Ramón Flores, Project Coordinator, COENER		Signature 	
		Typed Name Henry H. Bassford, DIR	
		Date 4/25/86	

13. SUMMARY

At the time of the evaluation (July 5, 1984), the institutional arrangement of COENER appeared to be adequate. COENER has been reasonably successful in raising an awareness of the need to exchange non-renewable energy for renewable, hydro energy; for this purpose the mini-hydro component was developed. Unfortunately, personality problems among the principal coordinators of the component created a poor image in efficiency. At the time of writing this report (November, 1985) the problems have been overcome and COENER's image has changed considerably. The coordinators are devoting all their time to the project and improving their qualifications. They are up to date in program scheduling after the component was transferred to CDE. They are finishing the bid documents for the Río Yuboa project, have a feasibility study underway (Río Masacre Project) and are planning to do two more design-construction studies with only short-term technical assistance. The five recommendations have been acted upon and are completed as of this date.

14. EVALUATION METHODOLOGY

The evaluation was conducted by Fredrick March, Director of Energy Planning/Management at Louis Berger International Inc., Washington D. C., assisted by Jack Fritz a staff member of the National Academy of Sciences, Washington, D. C., and submitted to USAID/DR on July 5, 1984. It was based on interviews and document reviews. There were 23 persons - all participating in the mini hydro component- interviewed during the course of the evaluation, some of them more than once.

15. EXTERNAL FACTORS

None.

16. INPUT

The evaluation of this component recommends that the technical assistance provide some training to the junior engineering personnel of the COENER/INDRHI/CDE. At the time of writing this report (November 1985) the inputs are as follows:

a. Reconnaissance studies: Of 55 sites investigated as possible hydro power sites, only 25 were selected for reconnaissance studies. These resulted in recommendations for further investigation of 17 sites.

b. Evaluation studies: At the time the evaluation was written in July 1984, 11 sites out of 17 had been investigated to assess their financial, economic, technical, social and environmental aspects, and to rank them for further studies. Of those evaluations, three have been completed (Río Banilejo, Río Guayabal and Río Yuboa Projects), and two are in process (Manuel Bueno and La Casualidad Projects).

c. Feasibility studies: The Banilejo project was rejected as further investigations showed it to be non feasible. The Guayabal project, although it has a good rate of return, was postponed because its capacity of 2,500 KW falls in the range of small hydro and not mini hydro; it also has a high construction cost. The Yuboa Project was selected because its 470 KW output is within the mini hydro definition, it has a good rate of return and the cost estimate within an acceptable range. It was agreed to work simultaneously with the feasibility studies and the final design for construction.

In the opinion of the evaluators, the Contractor provided a resident engineer and short-term staff of high technical calibre, but they have experienced some difficulties because the counterpart personnel had less experience than anticipated, they encountered difficulties in obtaining logistical support for office and field work, there were no budgetary provisions for short-term staff to prepare work in the company's Chicago Headquarters.

17. OUTPUTS

At the time of the evaluation, there was little output since not a single feasibility report nor design drawings had been started. At the time of writing this report (November 1985), however, the bids to supply the Río Yuboa electro mechanical equipment were evaluated as well as the prequalification of bidders for the construction of the civil works. Bidding documents for construction of civil works will be released shortly.

22. LESSONS LEARNED

- a) Preliminary investigations of possible sites require at least one day per site.
- b) If possible, emphasis should be given to use of existing canals as considerable infrastructure is already in place.
- c) Some short-term training including visits to TA contractor office should be included in future projects.
- d) Careful consideration should be given to siting a working organization such as the PCH group in a planning and research organization such as COENER.

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192-45181

EVALUATION REPORT
USAID - DOMINICAN REPUBLIC
MINI-HYDRO DEVELOPMENT PROGRAM

JULY 5, 1984

SUBMITTED BY:

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EVALUATION REPORT
USAID - DOMINICAN REPUBLIC
MINI-HYDRO DEVELOPMENT PROGRAM

JULY 5, 1984

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SUMMARY OF RECOMMENDATIONS

Summary of Recommendations

AID Project Monitoring

USAID should improve the function of project monitoring. Clear backstopping responsibilities should be assigned to a career USAID project officer who will take on the administrative responsibilities, freeing the technical monitor to focus on providing technical services directly to COENER.

Administrative Support By COENER

COENER should improve administrative and logistical support to the project. Given the current economic crisis in the country and the budget austerity in government, USAID should consider direct ways to assist COENER in funding some of these improvements, such as office supplies, field equipment, and a petty cash budget for contingencies COENER needs to free key project technical personnel from an excess burden of administrative work best handled by administrative assistants.

Institutional Plan

INDHRI and CDE together with COENER should develop a plan for the institutional future of the project group. In addition, steps should be taken to implement the stated policy of INDHRI managing the study and design phase, while CDE manages the construction and operational phases. Finally, CDE and INDHRI should increase the availability of senior engineers to the project. The project is currently staffed almost exclusively by junior engineers who need extensive on-the-job training, and access to senior engineers who can serve as mentors, trainers, and role models.

Amendments to Harza Contract

COENER and USAID should favorably consider contract modifications suggested by Harza relating to deliverables, schedule, and ability to charge for services rendered in Chicago. Additional contract modifications are needed to clarify chargeable items and to avoid the problem of disallowed expenses in the future. Also, AID should consider funding some of the expenses related to logistical support of office and field activities through the Harza contract.

Contract Extension

The Harza contract should be extended by one year to allow COENER sufficient time to achieve project objectives, and the full benefits of contractor technical assistance. This extension should afford an opportunity to introduce an alternative resident project manager to the benefit of all concerned parties.

Training and Human Resources Development

A training plan and allocation of resources to implement it is needed. Harza should propose to conduct a training needs study, and to structure a more formal technical training activity within the project. Such a program may have links to a university, to CDE and INDHRI. This would constitute an additional item in the Harza contract.

I. OBJECTIVES OF REVIEW

The overall objective of this report is to assist USAID and the Comision Nacional de Politica Energetica with an evaluation of the Mini-Hydro Development Program. The program was assessed for the performance and, identification of problems. Recommendations were suggested to help the program better achieve its objectives. In particular, the following issues are covered in this report:

1. The actual versus planned institutional arrangements among COENER, INDRHI and CDE with respect to Mini-hydro Program implementation.
2. The effectiveness of the operational relationships among the three implementing agencies, especially at the senior management level, with emphasis on coordination of project activities.
3. The adequacy of the personnel assigned by each agency to the project, their qualifications and terms of employment.
4. The accomplishments achieved under the technical assistance contract and the performance of the contractor.
5. A.I.D. effectiveness in project monitoring.
6. The likelihood of achieving the original objectives of the mini-hydro component.
7. Management or technical recommendations which could improve project implementation.

In addition, we have covered a number of issues not explicitly contained in our contract such as the technical adequacy of project design and the process of contract management.

II. APPROACH

The evaluation was conducted by a two person team consisting of Frederic March and Jack Fritz. Mr. March is Director of Energy Planning/Management at Louis Berger International.

Dr. Fritz is a nationally recognized expert in mini-hydro development and a staff member of the National Academy of Sciences.

1. Document Review

The evaluation included a review of the documents listed on Exhibit 1.

2. Interviews

Interviews with the persons shown on Exhibit 2. Our method was to interview each person about their experience with the project. Key people were interviewed more than once. As we learned about the project from interviews and review of documents we formulated a diagnosis of issues and recommendations. Our approach was "open" in that we shared current views with the major persons in the process and asked them to comment, agreeing, disagreeing, or amplifying as we went along. Thus our views changed during the interviews.

Toward the end of the interviews we covered on a set of findings and presented the key points to USAID, the Comision and Harza. Thus, this report will confirm and report on those issues and recommendations which key persons perceived to be salient.

However, findings and recommendations herein represent the opinions of the evaluation team alone, based on their best efforts to understand and to contribute to a more effective project.

Exhibit 1

Documents Reviewed

- Project Paper
Dominican Republic
Energy Conservation & Resource Development
December 4, 1981

- Comision Nacional de Politica Energetica
Request for Technical Proposals
Technical Assistance in Small Hydro Development
Due Date: January 15, 1984

- Technical Proposal
Harza Engineering Company
January 15, 1983

- Contract between Ramon A. Delgado
and USAID of January 3, 1983

- Monthly Progress Reports
February 1983 to May 1984
Prepared by Ramon A. Delgado, CRD

- Progress Report of Harza
November 15, 1983 - February 15, 1984

- Cirriculum Vitae
Staff assigned to the project

- National Rural Electric Cooperatives Association
 1. The Viability of Small Hydro in the Dominican Republic
 2. Site Selection Methodology 1980-81
Bogart, O'Leary & Shaw

- Revised Project Schedule
Proposed by Harza

- Project Reconnaissance Report
Estudio de Reconocimiento
May 1984

Exhibit 2

Persons Interviewed

USAID

Larry Armstrong
*Ramon A. Delgado
Leo Perez-Minaya
Debra DeWitt
William Smith
G. Aracena
Nelton Gonzalez

COMISION

*Jose Ramon Acosta
*Luis Alou
Cesar Gomez
Jose Ceron

Project Staff

Milagros Beevers (CDE)
Ernastina Perez (INDHRI)
Paulina Paulino (INDHRI)
Jose Cabrero (INDHRI)
Fernando Bermudez (INDHRI)
Felix Baez (COE)
Sandra Cortorreal (CDE)

Other Government Officials

Alexis A. Espinal T. (INDHRI)
Isidro Pasos M. (INDHRI)
Marcela Jorge Perez (CDE)

Harza

*Robert E. Gewargis
*Eduardo A. Mellado

*Denotes persons interviewed more than once

III. ISSUES RELATED TO COENER

A. Accomplishments

1. Assessment

Notwithstanding the problems discussed herein, COENER is to be commended for having asserted leadership in organizing the project, mobilizing a team, and setting an important process into motion.

The major visible product to date has been the Reconnaissance Report. The staff has produced an excellent document which is serving as an effective guide to site selection for further development.

2. Recommendation

None other than already indicated.

B. Likelihood of Achieving Original Objectives

1. Assessment

The objectives of the program include:

- . Developing an effective mini-hydro institutional capability.
- . Identifying specific mini-hydro projects for implementation within the current AID assistance program.

While there may be changes in the schedule and the number of field projects, we feel that the project is likely to achieve its original objectives. To assure that this occurs will require the implementation of key recommendations of this evaluation report.

2. Recommendation

None other than already indicated

C. Institutional Relations

1. Assessment

At the executive level, CDE and INDHRI have historically had problems relating to an overlap of responsibility when water resources are needed for power generation. In the last two years, relations have greatly improved, with each participating in the Board of Director meetings of the other. In addition, the Executive Secretary of COENER now attends board meetings of both CDE and INDHRI.

It must be understood that both INDHRI and CDE have the institutional capability to carry out the mini-hydro project on their own. However, mini-hydro is a relatively new field with particularly strong jurisdictional overlap between the two agencies. Housing the project in COENER, which does not have the hydropower technical implementation skills is a reasonable compromise. It allows the country to obtain experience with mini-hydro projects in a neutral institution which provides an environment in which engineers from both CDE and INDHRI can be part of the same team. All parties agree that COENER should not create a new hydropower bureau. It should only serve as a temporary home until such time as INDHRI and CDE agree on how to cooperate on a mini-hydro development program between them.

To date, there is no plan for the institutional future of the mini-hydro group. Without such a plan, personnel will simply return to their respective agencies at the end of the AID project, with no assurance that mini-hydro development will continue. We feel that this uncertainty affects the morale of project staff.

The intent of the government has been for INDHRI to provide the leadership for study and design and for CDE to take over for construction and operations. However, at this time INDHRI is providing no effective technical leadership. The INDHRI counterpart person has devoted only a small portion of time to the project. Thus, the project management is effectively in the hands of the Comision. Unless this situation is changed, INDHRI is not likely to develop the management skills for a mini-hydro study and design operation.

2. Recommendations

- (1) Develop a permanent institutional plan for the minihydro project by the end of this year. This should include a definition of the departments within CDE and INDHRI which will be responsible for mini-hydro development, the areas of coordination and cooperation between the departments, the schedule for implementation, the initial workload related to mini-hydro sites identified in the project, the managerial and technical positions needed, and the assignment of current project personnel into positions of responsibility as a function of their skills and capabilities.
- (2) Formalize INDHRI's management control of the study and design phases of the project by designating a qualified managerial person for a full-time commitment. The engineer who is currently the designated INDHRI counterpart is qualified for the managerial role, but her commitment needs to become full time. The full-time physical persence in lieu of the manager is not satisfactory. Moreover, the INDHRI manager's authority vis-a-vis the COENER management needs to be explicitly defined.

D. Effectiveness of Operational Relationships

1. Assessment

At the operating level, the situation is less than ideal. INDHRI and CDE have designated very junior personnel who need training, but have not designated senior personnel to facilitate this process. The entire burden of training has fallen on the contractor. While senior personnel from INDHRI and CDE provide occassional technical inputs, they are not involved in activity developing junior staff capabilities.

COENER's project management is excessively bogged down with administrative detail best handled by an administrative assistant or executive secretary. This impairs managerial and technical effectiveness.

There is poor logistical support of the project. Elementary needs like office services, supplies, and transportation are difficult to obtain, often retarding work schedules. These problems partly stem from an austerity program in government expenditures due to a national economic crisis. This situation affects all of COENER's projects.

Finally, within this framework of operational problems, COENER is experiencing serious problems in relating to the Contractor. There is a feeling on the part of COENER that Harza has not shown a sensitive understanding of COENER's operational problems and constraints and has contributed to poor relations. (See Chapter V).

2. Recommendations

- (1) COENER should designate an administrative assistant to free the technical management persons for more essential functions. Specifically, COENER's Project Manager, and the INDHRI/CDE counterpart project managers should spend more time on project technical issues, and interacting with the engineering staff.
- (2) Additional senior staff from INDHRI and CDE should be made available on a part-time basis, and directly involved with the training functions.
- (3) AID should assist in helping to solve budget problems within the project so that purchase of essential materials and services is facilitated (See Recommendations Section C).

E. Facilitation

1. Assessment

The project lacks some basic physical support: transportation for field visits, office supplies and the variety of tools and services necessary to operate an engineering office. Ability to collect timely site information for engineering design and construction is limited. This leads to professional time wasted and causes delays in project implementation. COENER lacks the budget to resolve these problems.

2. Recommendations

Provide the following:

- (1) Two micro computers, one portable, one stationary with the same operating system, photocopy facilities, petty cash fund for office supplies, calculators, drafting equipment, and locked cabinet.
- (2) Provide field equipment including walkie-talkies and altimeters.
- (3) Ask COENER/Contractor to provide a list of needed items, and find a way to fund their purchase.
- (4) Add additional budget to fund soil/foundation and topographic exploration at sites. Harza should provide the specifications.

F. Adequacy of Personnel

1. Assessment

- Full-time project personnel assigned by CDE and INDHRI are well qualified junior level engineers for the day to day technical work, when under supervision of a technical expert.
- Project management and counterpart personnel have some good experience, but more experienced persons would be desirable in addition.
- Access is needed to more senior technical experts in CDE and INDHRI on a more timely basis.

Overall, while the staff needs more training and development, they are adequate for the project.

2. Recommendations

- (1) Improve access to senior technical persons in CDE and INDHRI, including a "mentor" arrangement tied into a training plan.
- (2) Develop a training plan to better address needs of the project staff (See III C).

IV. ISSUES RELATED TO THE CONTRACTOR

A. Execution of Technical Work

1. Assessment

The contractor has provided resident and short-term staff of high technical calibre. Technical work is being effectively accomplished and the Dominican Staff counterparts are obtaining good experience and on-the-job training.

The contractor has experienced a number of difficulties which relate to problems previously discussed. These have included:

- . Counterpart personnel with less experience than was anticipated.
- . Logistical support for office and field functions being difficult to obtain.
- . A schedule of contract deliverables which was not possible given the actual conditions of getting information from the field, and the experience level of counterpart staff.
- . No budgetary provision for short-term staff to prepare work in the company's Chicago headquarters.

The contractor has kept COENER and AID informed of these problems and has made constructive suggestions as to their resolution, including certain actual change. (See Section V, B)

On the technical side, considerable progress has been made. The counterpart staff is effectively taking direction from the contractor and producing creditable technical work involving field investigations, office analysis, and report writing.

The contractor is to be commended for his technical achievements including the forging of an effective team from junior counterpart staff, training activities, and analytical results.

2. Recommendations

- (1) Remove barriers to more effective technical accomplishment as recommended elsewhere in this report. (See Section V, B and C)
- (2) Implement contractor proposed changes, in the contract. (See Section V, B)
- (3) Develop a training plan for project staff based on a needs study. (See Section V, C)

B. Effectiveness of Client Relationship

1. Assessment

Contractor relations with the client organization, COENER, have not been good. This is the case despite the high quality of technical work, and Harza's excellent client relationships with both CDE and INDHRI on other projects.

The source of the difficulty appears to be the resident project manager. From COENER's viewpoint, all of the other projects suffer similar problems of logistics, personnel, and facilitation, and yet only in the mini-hydro program have client-contractor relationships deteriorated to such an extent.

The individual involved is an outstanding engineer who is fluent in Spanish. He is dedicated and hardworking. His efforts on behalf of the project are truly impressive. However, he apparently lacks the experience and skills to manage the non-technical side of client relationships in this particular case.

COENER maintains that in this case, Harza has made itself part of the problems they are seeking to solve, rather than part of the solution. In brief, as Harza identified issues and tried to get COENER to solve problems, it was perceived by COENER as adding fuel to the fire. COENER feels that Harza showed impatience, expressed their concerns in an intemperate manner, and did not show sensitivity to the constraints within which COENER must operate. The result is a loss of confidence in the Harza resident to work with COENER executive's effectively on issues relating to institutional support of the project.

While things have improved over the last two months, it is clear that COENER merely is tolerating the existing situation, thanks to the effective intervention and support of Harza executive staff. It is also clear that the Harza resident feels COENER has not been adequately supportive nor sympathetic to the problems he has experienced since assuming his post in September 1983. He also feels that COENER has not shown flexibility, has not followed through on logistical support commitments, and has responded with improvements (such as adequate new office space) only after repeated protest and conflict.

Finally, the personal relationship between the resident and the COENER coordinator is not good. There seems to have been a hardening of positions on both sides. Both men, while outstanding professionals, are relatively new to program management. The resident has not had the experience of managing client relationships. The coordinator has not had the experience of supervising expatriate technical assistance. We feel that each is committed to representing the values and interests of their respective organizations, but has difficulty in visualizing the other's position. There is a need for more flexibility.

As many of the operational mechanical problems have been resolved, tension between the contractor and COENER have abated. We expect that implementing recommendations related to contractual improvements, administrative support and facilitation will help contribute to a better project climate and working relationship. However, it is difficult to reverse a situation in which the client has lost confidence in the contractor's representative to fully meet his expectations.

2. Recommendations

- (1) If the recommendation on extending Harza's contract by one year is accepted, we recommend that Harza and COENER jointly plan to introduce a new resident for a period of two years. A minimum of one month transition is recommended in which the two residents work together to achieve a smooth transition.

- (2) If the recommendation on extending Harza's contract by one year is not accepted, we recommend that COENER and Harza make every effort to cooperate without introducing a new resident. With only one year remaining for the contract, it would be inefficient to bring in a new person, and technical progress may be sacrificed.
- (3) We feel that COENER and Harza, at the executive level, have the ability and the commitment to work towards continued improvements in personal relationships at the project's operational level.
- (4) AID may consider offering additional support through the provision of management effectiveness training, provided the parties agree. Essentially, such training would be designed to help young managers understand a range of management circumstances, how they impact on personal relationships, and how good personal relationships in turn can be effectively used as a management tool. (Such training is provided by specialist in organizational development found at management schools and specialty consulting firms).

V. ISSUES RELATED TO USAID

A. Project Monitoring Effectiveness

1. Assessment

The individual assigned is technically qualified and has worked with diligence to monitor the project, help solve problems, and keep AID informed of significant developments. He is to be commended for his efforts.

Nevertheless, the monitoring of AID has not been effectively executed. Some basic problems of the project have not been effectively dealt with primarily due to project design.

These have included problems arising from inadequate scopes of work, inadequate facilitation of the project by the host country institutions, and personnel problems involving the contractor. Although they have been identified, and at least formally raised within AID (i.e. the monthly monitor reports), problems internal to AID have evidently prevented effective response.

The major shortcoming has been the process of "backstopping". Formally, the technical monitor has reported to a designated Energy Project Advisor, who should have effectively intervened to help solve problems. In practice however, the Energy Project Advisor reportedly delegated all administrative responsibility to the technical monitor. In addition, personal relations between the two have been poor, so that effective teamwork within AID was precluded. Problems identified by the technical monitor and problems involving the technical monitor were simply ignored. The technical monitor himself did not have the resource needed to solve the problems and therefore the AID traditional backstopping process did not working.

We feel that under the circumstances, AID has placed a competent individual in a difficult position as technical monitor and has failed to provide him with appropriate and effective administrative support.

Some of the problems stem from the way project monitoring position is structured. For example, we feel that technical monitoring of the project should be a part-time (3-5 days/month) not a full-time job. Further, we disagree with AID's original configuration of the project which involves the technical monitor needs in monitoring and technical assistance which justifies a full-time commitment. However, we consider it poor administrative practice to combine the monitoring role and technical assistance to the project in the same individual.

Additionally, we feel that it is poor practice to hire a local contractor with strong professional and personal connections to the agencies whose work is monitored. This puts the monitor in an untenable position because in any dispute, at least one of the parties can question the objectivity and institutional loyalty of the monitor.

The result of these conflicting responsibilities and loyalties is inefficiency in monitoring noted above. This has led to excessive involvement of senior AID staff in an ad hoc manner, sometimes with a sense of crisis.

2. Recommendations

- (1) Define clear monitoring procedures with identified backstop responsibility.
- (2) Assign a USAID career staff person as project monitor. Ideally, given all the activities of COENER, the mission should assign an energy advisor to cover all AID energy programs. Short of this an AID Project Officer with clear functional authority should be assigned.
- (3) Assess and redefine the role of the ISAID technical monitor position, taking into account his contributions to date, his technical capabilities, and the needs of the project. His role should be defined in one of two ways: (1) to undertake monitoring responsibilities which are a part-time effort (3-5 days/month); and (2) review results and provide technical assistance in the area of staff training. The Comision has indicated that the individual may be more effective by spending most of his time at the Comision offices, working with the staff on a day to day basis as a senior technical advisor.

- (4) More importantly, personal relations within USAID itself are critical. The technical monitor, however his role is redefined, should not continue to report to a person who is not able to manage him. It is essential thus that the monitor and his backstop enjoy good mutual relations.

B. Contract Management Issues

1. Assessment

Categories for invoicing are poorly defined. The Contract is open to excessive disputes over small details, and as a result, the time of the project manager and the AID comptroller is inordinately involved.

The Technical Scope is not consistent with project realities for reasons going back to project design (See "C"). There is a lack of sufficient flexibility in the documentation and procedures to remedy this on an ad hoc basis.

2. Recommendations

- (1) Amend the contract to reflect the recommendations of the AID comptroller. These involve a redefinition and expansion of goods and services which HARZA may provide within its existing contract
- (2) Amend the contract to correct inconsistencies with project realities (i.e. revised schedule submitted by HARZA). These include (1) Reorganization of short-term support staff to emphasize early training (2) Modification of schedule for 20 site studies to allow accelerated schedule for a few printing sites and (3) Bringing in hydrologist and planner and using less electromechanical engineering support.

C. PROJECT DESIGN ISSUES

1. Assessment

There has been a failure to plan for the training of expatriate personnel in the project paper. This has carried forward to the RFP and not perceived at the time of contractor selection. Thus, the contract scope, schedule and budget do not encompass a plan for training.

Given the level of experience of local counterpart personnel actually assigned to the project, it would appear that a well defined and implemented training plan can contribute to project success.

A training plan should be based on a needs assessment and contain the following: short and long-range needs of COENER, INDHRI/CDE, career objectives of each trainee, training resources of COENER/INDHRI/CDE, additional training resources in D.R., establishment of learning objectives, certifications for demonstrated on-the-job learning, and relation between training achievements and responsibilities.

There has been inadequate allocation of resources to COENER and the contractor based on faulty technical analysis from the project paper. The schedule for the fieldwork was too ambitious in relation to the realities of access to remote sites. In addition, given the need to train junior engineering personnel, the schedule for accomplishing of project results was too tight. Finally, in our view, the contract period of two years for the contractor is too short given the scope and objectives of the project. COENER needs additional assistance to: (1) Help with the bidding process; (2) Award of Contracts; (3) Supervision of construction; (4) Training of field and maintenance personnel, and (5) Supplemental training of COENER staff.

2. Recommendations

- (1) Develop a training plan based on a need assessment. This should be a Harza responsibility. It should include a short-term contract, and recommendations for continuing training of project personnel.
- (2) Accept current COENER/Contractor recommendations for amendment of scope and budget relating to rescheduling of the 20 field projects and reorganization of HARZA short-term personnel,
- (3) Consider additional amendments to encompass training needs and to extend contractor participation by one year to assure achievement of all project objectives with respect to technical results and to training. COENER should be asked to prepare a new proposal along these lines.

ARTICLE I - STATEMENT OF WORK

A. Objective

The Contractor will assist the National Energy Policy Commission (NEPC) and A.I.D. in overall implementation of the Mini-Hydro Program, financed under A.I.D. Loan No. 517-T-037 and A.I.D. Grant 517-0144.

B. Description

1. General Administration of Program Implementation

The Contractor will carry out administrative actions necessary for the timely implementation of all Mini-Hydro Program activities, including:

1. Assisting in the meeting of Conditions Precedents as set forth in the Loan Agreement;

2. Drafting of program correspondence;

3. Advising in and facilitating program procurement; and

4. Acting as advisor to the National Energy Policy Commission during the selection and contracting of the technical assistance teams for the Mini-Hydro Program, to be contracted with project funds.

2. Site Evaluation and Selection

1. Review final reports on site evaluation and selection prepared by the GODR teams and make recommendations to the Energy Commission and A.I.D. regarding their acceptability.

2. Identify problems foreseen in final site selection and make recommendations to the Energy Commission and A.I.D. regarding actions necessary to insure that these problems are overcome during sub-project implementation.

3. Pilot Sub-project Design and Procurement

For AID, implement the following tasks on specific requests submitted by the Energy Commission:

1. Review all design and equipment specifications;
2. Review all cost estimates;
3. Review and advise on all procurement documents;
4. Review all contract documents for civil works and procurement;
5. Review the time-phased plans for execution of the pilot sub-projects;
6. Monitor awarding of all contracts;
7. Make recommendations to the Energy Commission and A.I.D. regarding the acceptability of the designs, equipment, costs estimates, execution plans, procurement and contracting.

4. Pilot Sub-project Construction, Installation and Startup

1. Monitor all construction activities, including civil works, construction of transmission and distribution systems and installation of all equipment to insure conformity with specifications and high quality of work, advising the Energy Commission and A.I.D. of deviations from specifications and/or recommending change orders if necessary.
2. Review and certify all payments to construction and procurement contractors for disbursements of both A.I.D. Loan and GODR counterpart funds.
3. Monitor startup and initial operation of all mini-hydro sub-projects, make final inspection and make recommendations regarding acceptance of sub-projects to the Energy Commission and A.I.D.

5. Reports

Prepare and submit to the Energy Commission and A.I.D. monthly written reports ^{in Spanish} to include such information as work performed, resumé of

pertinent discussions, problems encountered, decisions taken, recommendations made, and summaries of field trips including conditions, progress of work at sites, problems and recommendations.

C. Spanish Version

The Spanish version of the statement of work is attached as an Annex to this contract. In the event of any ambiguity or conflict between the English and Spanish versions of the statement of work, the English version shall prevail.

ARTICLE II - PERIOD OF CONTRACT

The Contractor will perform personal services under this Contract from January 3, 1983 through January 2, 1986.

ARTICLE III - CONTRACTOR'S COMPENSATION AND REIMBURSEMENT

A. AID shall pay the Contractor compensation after it has accrued and reimburse him in local currency (Dominican Pesos) for necessary and reasonable costs actually incurred by him in the performance of this Contract within the categories listed in Paragraph C below and subject to the limitations applicable thereto as set out herein and in the attached General Provisions (GP).

B. The amount budgeted and available as personal compensation to the Contractor is calculated to cover a calendar period of three years (which is to include vacation and sick leave earned during the Contractor's tour of duty).

C. Allowable Costs

1. Compensation at the rate of RD\$26,400 per year	RD\$83,226.00*
2. Vacation bonus (4.17% base annual salary)	3,471.00
3. Christmas bonus (1/12 th of base annual salary)	6,935.00
4. Health and life insurance	525.00
5. Physical exam	85.00
6. Local per diem	<u>6,600.00</u>
	RD\$100,842.00

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* The Contractor's base salary for the first year of this Contract is established at RD\$26,400 (or daily rate of RD\$101.53). Subject to Contractor's satisfactory performance of duties hereunder, and approval by the USAID/DR Contracting Officer, the Contractor may receive a salary increase of not to exceed 5% of his base salary at the end of each year of service.

D. Maximum Dominican Peso Obligation

In no event shall the maximum Dominican Peso obligation under this Contract exceed RD\$100,842. Contractor shall keep a close account of all obligations he incurs and accrues hereunder and promptly notify the Contracting Officer whenever in his opinion the said maximum is not sufficient to cover all compensation and costs reimbursable in local currency which he anticipates under the Contract.

ARTICLE IV - PRECONTRACT EXPENSES

No expense incurred before execution of this contract will be reimbursed unless approved by the Contracting Officer.

ARTICLE V - ADDITIONAL PROVISIONS

A. Logistic Support

Contractor will be provided with office space, office equipment, secretarial services, and local transportation for project purposes during the period of this Contract.

B. Payment

Payment for services hereunder will be made monthly and in accordance with General Provision No. 11.

C. Contract Administration

Following execution of this Contract, full contract administration will be the responsibility of USAID/DR.

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