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PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE On-Farm Water Management	2. PROJECT NUMBER 391-0413	3. MISSION/AID/W OFFICE Islamabad
	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) <u>2</u>	
<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING A. Total \$ <u>12,254</u> B. U.S. \$ <u>7,500</u>	7. PERIOD COVERED BY EVALUATION	
A. First PRO-AG or Equivalent FY <u>77</u>	B. Final Obligation Expected FY <u>77</u>	C. Final Input Delivery FY <u>81</u>		From (month/yr.) <u>May 1978</u>	To (month/yr.) <u>September 1979</u>

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
<p>1. Recommendation: Project beneficiaries should be conceptually defined as the rural poor.</p> <p>Action: Mission does not agree with evaluation team recommendation.</p> <p>The following recommendations require further study.</p>	N/A	N/A
<p>2. Recommendation: All land ownership requirements for watercourse improvement and precision land leveling (PLL) be removed.</p> <p>Action: Mission requests the Government of Pakistan, Water Management Cell, initiate a study of small farmer selection criteria which might be implemented in future projects.</p>	Ministry of Food, Agriculture and Cooperatives, Water Management Cell. (Mr. S. A. Raza and Mr. A.M.H. Kango)	September 1981
<p>3. Recommendation: Establish the legal authority for Water User Associations (WUA) and Provincial OFWM officials.</p>		

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT	
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input checked="" type="checkbox"/> Other (Specify) <u>This project terminates 12/80.</u>	A. <input 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 type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P		C. <input checked="" type="checkbox"/> Discontinue Project	<u>see continuation sheet</u>

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)	12. Mission/AID/W Office Director Approval
See continuation sheet.	Signature _____
	Typed Name <u>Arthur M. Handly, DIR (A)</u>
	Date <u>March 31, 1980</u>

PROJECT EVALUATION SUMMARY (PES)

Continuation sheet - page 1

A. Actions / Decisions	B. Action Officer	C. Date Action to be Completed
<p>3. (Continued)</p> <p>Action: We believe the Government should (a) articulate the roles and responsibilities of farmers, OFWM personnel at provincial and federal level and other entities involved in water management activities; (b) develop a comprehensive implementation plan for development of WUAs and their integration into future OFWM type projects; and (c) formulate an implementation plan for enactment of appropriate legislation.</p>	<p>Same</p>	<p>September 1980</p>
<p>4. Recommendation: Continued research and testing of low cost watercourse linings and other improvement technologies is necessary. The project must build in flexibility so that suitable procedures and technologies evolve.</p> <p>Action: We request the Government study ways to strengthen project linkages to research organizations.</p>	<p>Same</p>	<p>September 1980</p>
<p>5. Recommendation: Demonstrations and farmer training should be covered by assigned targets and Fixed Amount Reimbursement (FAR) payments. Emphasis should be given to extension models working in the country to determine the best model.</p> <p>Action: We suggest that the Government develop a revised extension plan for the OFWM project. The provinces should be requested to focus existing extension activities in areas where watercourses have been improved and PLL has been carried out. AID is receptive to the recommendation that we provide FAR payments for extension activities. However, we believe a revised extension plan should precede FAR payments.</p>	<p>Same</p>	<p>November 1980</p>

PROJECT EVALUATION SUMMARY (PES)

Continuation Sheet - page 2

A. Actions / Decisions	B. Action Officer	C. Date Action to be Completed
<p>6. Recommendation: Present Provincial OFWM offices should be established as permanent directorates with legal ties to WUAs. Field staff should be expanded to include maintenance and inspection units in each project area.</p> <p>Action: We urge the Government to conduct a study of the OFWM organizational arrangements. Suggestions for improvement and strengthening of internal provincial inspection and maintenance units should be formulated and submitted to the provinces for discussion and implementation.</p>	<p>Same</p>	<p>September 1980</p>
<p>7. Recommendation: While not specifically addressed in this Evaluation Report, studies of watercourse improvements support the view that farmers should be able to pay for a greater portion of the costs of the improvements.</p> <p>Action: For future OFWM type projects we believe the Government should identify an appropriate financing mechanism which provides for at least partial financing from farmers for the material costs of watercourse improvements. We also suggest the Government explore the possibility and appropriateness of establishing a separate financial account for OFWM type activities where returns from farmers would be credited. It is envisioned that this account would be available for future OFWM investments.</p>	<p>Same</p>	<p>November 1980</p>
<p>8. Recommendation: The program is costly in relation to completion of physical works, field team productivity should be increased and overhead costs reduced.</p> <p>Action: We suggest the Government formulate a plan for increasing field team productivity. Some of the activities that could be explored are: (a) increase</p>	<p>Same</p>	<p>October 1980</p>

PROJECT EVALUATION SUMMARY (PES)

Continuation Sheet - page 3

A. Actions / Decisions	B. Action Officer	C. Date Action to be Completed
<p>8. (Continued)</p> <p>farmer administrative and management responsibilities for improvements, (a) provide additional training and technical assistance from rural sociologists to develop better field team promotional skills and approaches to farmers, (c) develop specially trained promotional field teams to canvas suitable pre-selected contiguous geographical areas, and (d) improve project area selection criteria.</p> <p>The following recommendations can be implemented without in-depth studies.</p>		
<p>9. Recommendation: Watercourse improvement manuals must be prepared for use by all provinces.</p> <p>Action: This action is now being taken by the Water Management Cell assisted by the Soil Conservation Service advisors. The Government should closely monitor this work and provide routine progress reports to ensure completion before July 1980.</p>	<p>Same</p>	<p>July 1980</p>
<p>10. Recommendation: Increase the number of AID inspectors.</p> <p>Action: Inspectors have been increased and AID is monitoring completion of project work to avoid delays in the future.</p>	<p>Mr. Dennis E. Wendel</p>	<p>Completed</p>
<p>11. Recommendation: Reduce PLL emphasis and restrict PLL work to areas on or contiguous to improved watercourses.</p> <p>Action: The Provincial field teams should be instructed to concentrate PLL work in improved watercourse command areas.</p>	<p>Ministry of Food, Agriculture and Cooperatives, Water Management Cell. (Mr. S.A. Raza and Mr. A.M.H. Kango)</p>	<p>April 1980</p>

PROJECT EVALUATION SUMMARY (PES)

Continuation Sheet - page 4

A. Actions / Decisions	B. Action Officer	C. Date Action to be Completed
<p>12. Recommendation: Establish personal ledger bank accounts (PLA) for all area and team leaders.</p> <p>Action: The Government should formulate procedures and recommendations and request the Provincial Government implement the PLA's.</p>	<p>Same</p>	<p>May 1980</p>
<p>13. Recommendation: Personnel actions should be improved.</p> <p>Action: We suggest the Government study the Evaluation Report recommendations for personnel actions and request the Provinces amend their personnel procedures accordingly. We also believe the Government should monitor the implementation of the proposals and report on progress.</p>	<p>Same</p>	<p>June 1980</p>
<p>14. Recommendation: Project recruits must not be trained until they receive a project appointment.</p> <p>Action: We believe that recruits should receive project appointments upon successful completion of a fixed trial period after their training. Appropriate recommendations to the Provinces should be formulated by the Government and their implementation monitored.</p>	<p>Same</p>	<p>May 1980</p>

PROJECT EVALUATION SUMMARY (PES)

Continuation Sheet - page 5

Continuation: Face Sheet PES - PAR I paragraphs 10 and 11.

10. Alternative Decisions on Future of Project:

The Joint Evaluation has confirmed the overall viability of a OFWM type project. The evaluation report recommends project design modifications to enhance the impact of future OFWM projects. Since the application of Section 669 of the Foreign Assistance Act has prohibited obligation of additional development funds to Pakistan, AID assistance to this project will terminate in December 1980.

11. Project Officer and Host Country Participants:
(alphabetical order)

- A. Mr. Jerney Berkoff, Economist
World Bank
Washington, D.C.
- B. Dr. Sidney A. Bowers (Team Leader), Soil Scientist
USAID, Islamabad
- C. Mr. Keith Byergo, Extension Agronomist
USAID, Washington, D.C.
- D. Dr. Gilbert Corey, Water Management Specialist
USAID, Washington, D.C.
- E. Dr. Gerald Hickey, Anthropologist
USAID, Washington, D.C.
- F. Dr. Raymond W. Hooker, Economist
USAID, Islamabad
- G. Mr. A.M.H. Kango, Agricultural Engineer
Government of Pakistan
Islamabad

13. **Summary.** The On Farm Water Management (OFWM) Project was originally planned as five (5) year activity. The initial tranche of loan financing of \$7.5 million for the pilot project was obligated in October 1976. The project was to terminate in December 1979 and additional loan financing of \$15.0 million was planned in FY 1980 for broader replication of the project through July 1981. Unfortunately, project accomplishments were much slower than anticipated as a result of the usual start up problems and implementation difficulties.

As a result of the relatively poor project implementation progress during the initial two year period, the Mission decided to undertake a major review of the project, assess its development impact and implementation problems. A redesigned and streamlined OFWM Project was tentatively planned for 1980-81.

Unfortunately the application of Section 669 of the U.S. Foreign Assistance Act (nuclear non-proliferation) prohibited the Mission from obligating additional development funds planned for a redesigned OFWM project. However, as a result of the intensive review of the project in June 1979 the Government of Pakistan and the Mission agreed to extend the terminal date by one year to allow more time for the project to reach its objectives and to disburse the remaining loan funds. The Government and the Mission also agreed, as a result of this intensive review, to focus project technical assistance from the Soil Conservation Service (SCS) advisors on the completion of training and field team manuals.

Unfortunately after the departure of the evaluation team the project encountered a further set back. As a result of the burning of the U.S. Embassy and subsequent disruptions, a general evacuation of the U.S. employees and dependents was ordered in November 1979. All the members of the SCS advisory team except the team leader were evacuated. In March 1980 two SCS team members returned to Pakistan, and resumed their work.

Under normal circumstances, implementation of this complex OFWM activity would be a difficult undertaking. The uncertainties of project funding and absence of project technical advisors as described above created additional obstacles to project implementation.

Despite these obstacles the rate of project implementation has increased since the last evaluation conducted in May 1978. This increase can be attributed to greater provincial and farmer support for the project -- particularly the watercourse improvement component. In addition some of the initial start up problems have been resolved.

Notwithstanding the enhanced implementation status of the project, design and implementation problems remain. Project costs are high in relation to team productivity. One component of the project, Precision Land Leveling (PLL), has not been well received by small farmers, the intended target group. The low priority for PLL by small farmers may also account for at least some portion of the low productivity and high administrative costs of the project.

The project design for reaching the smaller farmer target group by restricting the project to certain land holding sizes also appears, in retrospect, to be an inadequate means of focussing the project on the small farmer. The land holding criteria also appears to have contributed to poor project performance at least initially. There has also been reluctance on the part of project officials to concentrate the project on the small farmers.

It appears from our current project perspective that at least a portion of the project purpose: "public and private sector capability is established to plan and deliver on farm water management services to farmers at economic cost", will be achieved. There is a growing capability on the part of provincial officials to carry out PLL and watercourse improvements. The experience of the project with private sector involvement in the PLL component is not encouraging and except for casting of concrete structures appears to be nonexistent for the watercourse improvement component of the project.

The attainment of the project goal: "Increased agricultural production and improved income for low income farmers in Pakistan," is directly related to two project elements which have not been generally successful i. e. , extension of agronomic practices and water management techniques and the development of viable water user associations for continuing maintenance and repair of improved watercourses. Nevertheless, there is some evidence from the

"Survey of Improved Watercourses" by Drs. M. Ashraf and R. Hooker that would indicate increased agricultural production and hence improved income is accruing to project beneficiaries.

On the other hand, the prospects for attaining the project sub goal: "OFWM concept is fully appreciated and taken account of by the Government in agricultural planning and the project is replicated" appear to be much better. Federal and Provincial Government leaders have publicly stated they are pleased with the project and will continue OFWM activities. Other donors have also proposed substantial foreign exchange financing for similar OFWM activities. While the project has proven the initial feasibility of carrying out water management activities under the Federal level Water Management Cell and Provincial Departments of Agriculture, it remains uncertain whether other donors will utilize this demonstrated capability for future activities.

14. Evaluation Methodology

The reasons for this evaluation were: a) to comply with Project Paper requirements; b) to stimulate a more beneficial and rapid loan disbursement; and c) to develop relevant recommendations for subsequent national OFWM Projects. The evaluation covered all project components. Team members, representing the GOP, the Mission, AID/Washington, and the World Bank, were selected with skills matched to project components. Included were economists, extension agronomists, agricultural engineers, soil scientist, and an anthropologist. In preparation for the evaluation, team members were briefed on the previous OFWM evaluation, and on various pertinent mission surveys.

Each team member was assigned primary responsibility for appropriate sections of the evaluation which consisted of interviews with GOP, OFWM, and AID officials, OFWM field personnel, and participating farmers. In addition team members inspected project field activities. All provinces were visited. Data collected and considered, included those available measurable outputs described in the Project Paper evaluation plan. Interviews and field findings were reviewed and a team consensus developed on all pertinent issues. Each team member wrote his assigned portions which were compiled by the team leader into the final report.

Additionally, in preparation for this evaluation, the Mission conducted two in-depth studies of the primary project components: watercourse improvements and PLL. These studies titled "Survey of Improved Watercourses Punjab Province On-Farm Water Management Project", by Drs. Malik Ashraf and Raymond Hooker and "Constraints on Small Farmers in the Precision Land Leveling Program in the Pakistani Punjab" Colorado State University Report No. 44 prepared by Raymond Renfro, Muhammad Iqbal Akhtar Niazi and Abdul Ghaffar, provided reliable data and significant insights into these project components. These studies are attached to the Evaluation Report.

15. External Factors

The Project Paper provided for a \$22.5 million loan to be advanced in two installments; \$7.5 million initially and \$15.0 million three years later. The estimated project implementation rate proved far too optimistic. The slow project start up and persistent implementation problems delayed loan disbursements and consequently postponed the second loan installment of \$15 million. Also, in compliance with Section 669, the Foreign Assistance Act, AID assistance to Pakistan was terminated. Thus, external factors concerned with "nuclear-non-proliferation" decreased both the loan amount and the project time period and thereby greatly diminished the possible accomplishments through this project.

The project assumptions as summarized in the logical framework affecting the "project/program" and "purpose" to "goal" linkages remain generally valid. However, many assumptions affecting the "output" to "purpose" linkages are not now considered valid. Some of the more relevant assumptions which ought to be reconsidered in the design of the revised project are:

1. "Pilot demonstration results, combined with incentives will motivate farmers".

At first glance this assumption would seem logical but since existing extension activities are generally considered to be poor and other extension interventions were not adequately considered in the project design, it cannot be considered a valid assumption.

2. "Special consideration will be given to low income farmers desiring to participate in this program". This assumption also did not prove to be valid especially for the PLL component of the project. See Renfro Study attachment - pp. 71-74. For reasons explained in the summary, future projects should focus on alternative ways of identification and working with low income groups.

3. "Incentives, such as credit facilities, and tractors as well as return on investment will attract entrepreneurs to engage in PLL custom service operations".

Credit was not a component of this project although a credit plan was a requirement in the project agreement. Unfortunately, while a credit plan was established it did not seem to function well either for the farmers adopting PLL or for entrepreneurs who wished to purchase tractors. In addition it was often stated that the demand for tractors was higher for other related agricultural activities such as hauling than for PLL.

4. "Program publicity will be aimed at low income farmers". Publicity and other information dissemination activities and responsibilities should have been articulated in the project design. Since it was not a part of the project, little attention has been directed to this important subject.

16. Inputs

This project provided loan financing under the Fixed Amount Reimbursement (FAR) method for completed watercourse improvements and PLL. Except for technical assistance under a related grant activity the project did not finance other inputs.

However, the project did require as part of the watercourse improvement component, considerable amounts of cement for construction of watercourse structures. Frequently cement was in short supply and special planning and arrangements on the part of project officials were required. On occasion project activities could not advance because of cement shortage.

Credit for most low income farmers was necessary for participation in this component of the project. However, obtaining credit from banks was a difficult and time consuming operation. Practically, many low income farmers were not able to receive credit for PLL.

Since the project did not provide tractors for PLL adopters, many farmers and especially small farmers encountered difficulties participating in this component. Farmers who owned tractors, of course more easily participated in this component.

17. Outputs

The primary outputs from this project are numbers of watercourses improved, numbers of acres of precisely leveled land, and the number of field teams formed. While the Project Paper suggests targets on both a country-wide and provincial basis, the actual targets are established by the PC-1's which are the provincial governing documents. The outputs achieved are listed below.

	<u>Punjab</u>	<u>Sind</u>	<u>NWFP</u>	<u>Baluchistan</u>	<u>Country- Wide</u>
<u>Watercourse Improvements</u>					
PC-1 Targets	195	137	15	2	349
Achievements	202	16	9	0	227
% Target Completed	104.0	11.7	60.0	0	65.0
<u>Precision Land Leveling (acres)</u>					
PC-1 Targets	54,000	38,771	4,225	50	97,046
Achievements	13,901	9,208	1,733	60	24,902
% Target Completed	25.7	23.7	41.0	120.0	25.7
<u>Field Teams Farmed</u>					
PC-1 Targets	15	15	2	3	35
Achievements	15	13	2	3	33
% Target Completed	100.0	86.6	100.0	100.0	94.3

Punjab, the most important province agriculturally has exceeded their Watercourse Improvement (WCI) target. Sind has lagged in WCI primarily because project selection requirements, concerned with size of land holdings, excluded most Sind watercourses. Recommendations made by the evaluation team should stimulate watercourse improvement in Sind. In other provinces the WCI lag is related to delayed project start-up and provincial bureaucratic problems. Country-wide, precision land leveling has not been accepted by farmers. While many factors contributed to this poor acceptance--lack of equipment, lack of credit, etc.--the primary constraints appear to be that small farmers do not perceive the additional benefits in PLL and thus hesitate to take the financial risk.

18. Purpose

The project purpose is "to establish public and private sector capability to deliver On-Farm Water Management services (improvement of irrigation watercourses, precise leveling of farm land and improvements of crop and water management practices) on an economic basis." The delayed start-up and early termination of this OFWM Project precludes achievement of all of the EOPS conditions within the remaining project time. However, the change in official attitudes to favoring water management services indicate considerable progress towards probable formation of permanent OFWM Directorates within provincial Agriculture Directorates. Additionally, the present training of instructors from Extension Service Training Institutes in improved water management and agronomic techniques represents progress towards Extension Service reorientation. These imply that EOPS condition No. 1 (Project Paper, Annex D), Project Paper, could be achieved within 2 - 3 years. EOPS Condition No. 2, On-Farm Water Management implemented as part of the next five-year plan, has partially been achieved through their inclusion in the Fifth Five Year Plan (79-83). EOPS Condition No. 3, Annual Growth rate of 10 percent in number and size of private contractor, operations will not be achieved. There is little evidence of contractor interest in watercourse improvement. Strong farmer resistance to PLL makes future growth in numbers of private contractors doubtful. Thus, the private sector portion of the project purpose will probably not be established within the time period or to the extent anticipated.

19. Goal/Sub-Goal

The program goal is "increased agricultural production and improved income for the low income farmer in Pakistan." There presently is some minor evidence of increased production and thus by implication increased income. However, it is doubtful that three years of this pilot program is sufficient time for verifiable indicators to develop. The corresponding sub-goal is "On-Farm Water Management concept is fully appreciated and taken account of by the Government of Pakistan in agricultural planning and the project is replicated." Limited progress towards the sub-goal is evident. Such evidence is not from the specified indicators but from the repeatedly expressed attitudes of concerned GOP officials interviewed during the evaluation. Their strongly expressed support for this program represents an attitudinal change over the three years of this project. It becomes obvious that the GOP is now aware that serious water management problems exist in Pakistan's irrigated agriculture which are addressed by technologies offered through this OFWM Project. This awareness, however, primarily results from the achievements of the supporting Colorado State University Water Management Research Project whose finding on water waste and loss are convincing and verifiable.

20. Beneficiaries

The Project Paper requires that in order to insure distribution of benefits to small farmers watercourse command areas will be selected where atleast 75% of the farmers have holdings under 25 acres. This same selection criteria has been applied to PLL component of the project i. e. , farmers with less than 25 acres of land (30 acres in Sind and Baluchistan) are eligible for project financed cost sharing.

As a result of the difficulties in implementing the Project Paper selection criteria the Evaluation Committee recommended that the project beneficiaries be changed to the "rural poor" which would include village artisans, laborers, haulers, and others. The Mission believes this recommendation is inconsistent with the project goal which is to "increase agricultural production and improve income for the low income farmers."

Nevertheless the Mission agrees that the project selection criteria, if used exclusively, is inadequate. Essentially, it is not a broad enough approach to identifying low income farmers. The Mission believes that other procedures for selection of project areas where low income farmers may predominate should be developed and tested in future projects.

According to the studies conducted for this evaluation approximately 73% of the farmers along project improved watercourses surveyed in the Punjab had operational land holdings of less than 12.5 acres. (Survey of Improved Watercourses Punjab Province OFWM Project p.8). The guidelines therefore, as set forth in the OFWM Project Paper for watercourse improvements have been met.

Unfortunately, the opposite is substantially the case for the PLL component of the project. In the special study titled "Constraints on Small Farmers in the PLL Program Punjab" operational land holdings of beneficiaries of PLL cost-sharing were substantially higher than the maximum 25 acre selection criteria applied to watercourses (pages 19-23).

In addition most of the PLL acres cost shared under the project were located outside of the improved watercourse command areas. The Project Paper originally planned that PLL would be focussed in areas where watercourses had been improved in order to take advantage of increased water savings.

21. Unplanned Effects

Not pertinent at this time.

22. Lessons Learned

(a) Target Group Selection

The rate of implementation for watercourse improvements could have been enhanced if the project design had included well thought out and articulated selection plan for focussing project activities.

(b) Organizational Responsibilities

In order to enhance institutional linkages and development of permanent organizational structures, the institutional objectives of the project should have been better articulated. Technical assistance should have been provided to the government to assist articulate the roles and responsibilities of various governmental entities involved in OFWM activities.

(c) Financing

The strong farmer acceptance of watercourse improvements and the overall cost of current improvements indicate that the project should have explored the possibility of requiring the farmers payback at least a portion of the improvement costs.

23. Special Comments or Remarks

Despite the many problems associated with this project, the evaluation team concluded it has, to date, been very successful program. The project, starting from virtually nothing has developed a viable organization including training schools and field organizations capable of delivering to farmers a much in demand service; improved watercourses which offer the farmer both control of water and increased water delivery. This OFWM has the institutional capability in the Punjab and is developing the capability in the Sind to manage a larger water management program. Indicators such as the slow rate of loan disbursement fail to recognize the remarkable organizational accomplishments of this program.

Attached to this PES is the "Second Joint U.S. - Pakistan Evaluation" of the On Farm Water Management Project which consists of 75 pages of report, tables and summary and 40 appended pages.

The PES and Evaluation Report was compiled by Dr. S. Bowers Evaluation Team leader. Portions of the PES Part I and II were consolidated and redrafted in the Mission subsequent to Dr. Bowers' evacuation in November 1979.

SBowers/DEWendel:PPM, 3/31/80