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*Loan Review
& Evaluation*

PD-KAF 205

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ANNUAL LOAN REVIEW AND EVALUATION

GUYANA

AID Loan No. 504-L-008

RICE MODERNIZATION

I. BASIC DATA

- 1) Borrower: Government of Guyana
- 2) Guarantor: Government of Guyana
- 3) Executing Agency: Guyana Rice Development Company, Limited (now Guyana Rice Board)
- 4) Loan Amount: US \$12,900,000
- 5) Date of Authorization: November 27, 1968
- 6) Date of Execution of Loan Agreement: March 11, 1969
- 7) Date of Amendment of Loan Agreement: February 12, 1971
- 8) Terminal Dates:

| | <u>Original</u> | <u>Current</u> |
|---------------|-----------------|----------------|
| Commitments | 9/10/71 | 12/31/75 |
| Disbursements | 3/11/72 | 3/31/77 |
- 9) Period of Report: Beginning of project through July 1976.
- 10) Implementation Officer: George D. Reasonover, Chief Engineer
- 11) Drafting Officer: C. Gregory Smith, Jr.,
Capital Resources Development Officer

SUMMARY

The Rice Modernization Project was designed to meet urgent needs of Guyana, and has - in many respects - accomplished the goals which it was designed to meet. The project has resulted in a tremendous increase in the capability of the Guyana Rice Board (GRB) to develop, handle, dry, store, and export an increasingly better quality rice. The storage capacity estimated at 51,800 M.T. is an especially noteworthy improvement over the situation that existed when the project was initiated, and has benefited the entire sector, including the GRB, private millers, and private farmers. The Rice Research Station is operating adequately, and is consistently praised by visitors from CIAT and other international research institutions.

These impressive gains have been recorded despite the fact that this project has been subject to a seemingly endless succession of legal proceedings, is being completed by force account rather than by the original contractor, and is several years behind the originally scheduled completion date.

A final evaluation will have to await the completion of the facilities and probably the outcome of the arbitration proceedings, but would be very worthwhile at that juncture.

II. PROJECT

A. Introduction

In May, June and July 1976, the Guyana Rice Board (GRB) and its Consultants Black and Veatch International (BVI), and U.S.A.I.D. reviewed and evaluated the Rice Modernization Project, financed in part by AID Loan No. 504-L-008.

Those taking an active role in the review and evaluation were -

GOG/GRB

| | |
|---------------|---------------------------------|
| P.J. Williams | Chief Engineer |
| C.P. Kennard | Director of Research |
| Joshua Ching | Credit & Field Services Manager |

BVI

| | |
|---------------|------------------------|
| Bob Colbert | Field Project Director |
| Jeff Mitchell | Structural Engineer |

USAID

| | |
|----------------------|---------------------------------------|
| Arthur W. Mudge | Director |
| C. Gregory Smith | Capital Resources Development Officer |
| George D. Reasonover | Chief Engineer |
| Fred R. Marti | Agricultural Economist |
| George S. Eason | Rural Development Officer |
| Peter Kolar | Program Officer |
| Leila A. Mongul | Chief Loan Assistant |
| John A. Sawh | Assistant to the Controller |

B. Rice In Guyana

The growth of rice did not become widespread in Guyana until the East Indian immigrants began to arrive in significant numbers in the late 19th and early 20th century. Prior to this, cultivation was principally done on sugar estates for home consumption and by runaway slaves who found they could easily grow rice. By 1908, Guyana had reached the point where it no longer had to import rice, and in fact, began modest export in that year.

Guyana has been highly dependent on the production of two principal crops in the last century - rice and sugar cane. The coastal belt favors these crops, an abundant supply of labor has traditionally been available to work the fields, and markets in the region and would have generally been available for surplus production. Until the production of Bauxite Alumina became significant in the mid-sixties, sugar and rice accounted for eighty to ninety percent of annual export earnings. With the advent of large scale export of bauxite alumina in the mid-sixties the portion of export earnings generated by rice and sugar has dropped to approximately fifty percent.

TABLE I

G \$ Million

| <u>Year</u> | <u>Total</u> | <u>Sugar</u> | <u>Rice</u> | <u>Bauxite Alumina</u> |
|-------------|--------------|--------------|-------------|------------------------|
| 1967 | 211.7 | 62.2 | 25.2 | 82.2 |
| 1968 | 229.0 | 70.6 | 26.1 | 100.0 |
| 1969 | 252.9 | 81.7 | 19.2 | 120.3 |
| 1970 | 264.8 | 77.6 | 18.1 | 138.5 |
| 1971 | 290.9 | 92.2 | 21.3 | 134.9 |
| 1972 | 299.9 | 101.8 | 25.3 | 132.2 |
| 1973 | 288.0 | 75.9 | 25.0 | 138.3 |
| 1974 | 600.0 | 284.8 | 49.0 | 198.2 |

Source: Statistical Bureau Report for 1975.

The contribution of sugar and rice to employment in Guyana is perhaps more significant than the export earnings generated. The rice growing families in Guyana^{1/} varied from 32,000 families in 1955 to 45,000 in 1965 to an estimated 40,000 in 1975. Thus a rough average of 25 percent of the total population are primarily dependent on rice cultivation or processing for their livelihood. A similar percentage of the total work force is employed directly in the production/processing of rice. When adding the number of workers involved in sugar production or processing one finds that some 45 to 50 percent of the labor force in Guyana is dependent on these two crops.

While rice is not as important an earner of foreign exchange as is sugar, one cannot gainsay its importance. Some 300-350 thousand acres (roughly 50 percent of presently farmed land) are planted yearly to rice. Although 90 percent of the world's rice is grown and consumed in the orient, Guyana is a relatively large producer among western nations, and the amount consumed per capita in Guyana is among the highest in the Western Hemisphere. The inhabitants of Burma, Thailand, Taiwan, etc., consume about 300 lbs of rice/person/year, Guyanese consume 123 lbs/person/year, while average annual consumption in the U.S.A. is only 7 lbs/year. The by-products of rice are also crucial to the rural inhabitant. Straw is widely used for cattle feed, bedding, and basketwork, the husk for fuel, compost and building blocks, bran for animal feed and as a food additive, flour for many things, and rice chips for stockfeed and brewing a variety of drinks. Thus the investment in human and land resources in rice is tremendous, and as such, rice plays a very central role in the social and economic development of Guyana.

The basic trends in rice in recent years have been dependent on a number of factors, including world and domestic rice prices, government policy, sugar prices and doubtless other factors. The below Table reflects changes over time in acreage, total paddy production, productivity, milled rice production and milling efficiency.

^{1/} Average family size conservatively assumed to be 5 persons, of which two are considered able to work at farming.

TABLE II

| Year | Rice Acreage Planted | Paddy (Tons) Production | Tons/ Acre | Rice (Tons) Production | Conversion Efficiency % (Paddy to Rice) | Value G\$ 000,000 |
|------|-------------------------|----------------------------|---------------|---------------------------|---|----------------------|
| 1956 | 118,470 | 130,783 | 1.10 | 78,470 | 60 | - |
| 1960 | 220,207 | 209,512 | 0.95 | N.A. | N.A. | - |
| 1965 | 365,232 | 273,832 | 0.75 | 147,600 | 60 | - |
| 1970 | 316,950 | 218,900 | 0.69 | 142,285 | 65 | - |
| 1971 | 236,550 | 184,530 | 0.78 | 119,995 | 65 | - |
| 1972 | 202,210 | 144,780 | 0.72 | 94,107 | 65 | 27.4 |
| 1973 | 357,000 | 149,924 | 0.42 | 97,450 | 65 | 29.0 |
| 1974 | N.A. ^{1/} | 251,782 | N.A. | 163,000 | 65 | 47.0 |
| 1975 | ^{2/} 290,000 | 285,888 | 0.99 | 187,559 | 66 | 66.0 |
| 1976 | ^{2/} 270,000 | 211,630 | 0.75 | 133,766 | 63.5 | - |
| 1977 | ^{3/} 340,000 | 303,700 | 0.89 | 197,415 | 65 | - |
| 1978 | ^{3/} 370,000 | 353,068 | 0.95 | 229,490 | 65 | - |
| 1979 | ^{3/} 400,000 | 399,312 | 1.00 | 259,966 | 65 | - |
| 1980 | ^{3/} 420,000 | 470,499 | 1.12 | 306,076 | 65 | - |

SOURCE: Ministry of Agriculture and Guyana Rice Board Annual Reports

^{1/} 261,180 acres reaped

^{2/} Estimated

^{3/} Projected

The figures in Table II show that rice production and acreage reached a high point in the fifties and early sixties, entered a gradual decline in the late sixties, and remained static in the 1970's, although with estimates and projections for increases in the late 1970's. Among reasons cited are the decline in incentives for rice production, increased emphasis on sugar production, and lesser yield/acre due to double-cropping (resulting from less production in the small crop and possibly from decreases in soil fertility). Since the early 1970's there has been some growth in the acreage planted to rice and in total production. 1973 was a notable year in that acreage planted was very large, but acreage reaped only two-thirds of that planted. This spurred the GOG to make available reapers on a much more widespread basis in 1974/75. After a drop in acreage in 1974, the 1975 and 1976 estimates show a general upward trend, and projections through 1980 are for sustained increases in acreage planted as well as production per acre.

Total production of rice has been largely dependent on the acreage planted. There have not been increases in yield over the years, and average production/acre is only one-third of that of U.S. farmers. There should be yield improvement in the future as the Rice Research Station continues to refine its current programs.

The GOG has played a more active role in all phases of rice in the past few years. Prior to 1969, the Government-run Rice Marketing Board (RMB) was charged with marketing rice, and the Rice Development Company (RDC) with storage, milling and other activities. The RMB controlled all domestic and foreign marketing. A condition of the Loan Agreement was the consolidation of the RMB and RDC into one corporation, which was achieved in 1969. The Guyana Rice Corporation (GRC) which was subsequently renamed the Guyana Rice Board (GRB) has as its organizational functions and responsibilities the following:

- a) to develop the rice industry in Guyana and to promote expansion of the export trade in the industry;

- b) to exercise general supervision over the disposal of paddy produced in Guyana;
- c) to control the manufacture, purchase, sale, distribution and export of all rice and all by-products of paddy manufactured in Guyana;
- d) to carry on the business of rice and paddy merchants;
- e) to engage in such other commercial, industrial and agricultural activities which the Board deems necessary for the purpose of developing the rice industry.

The GRB is now responsible for two-thirds of the storage of rice, rice price policy, all export sales and internal marketing at the wholesale level, some farmer credit, and research and technical assistance to farmers. The private sector still accounts for 99 percent of production, 35 percent of storage, most milling, and retail sales at regulated prices.

A.C. Project Description

The project as described in detail in Annex I to the Loan Agreement consisted of three elements:

(1) Rice Storage Centers

The construction and placing into operation of six rice storage centers with necessary receiving, handling, cleaning, drying and grading equipment. These centers were to be located at Anna Regina, Wakenaam, Leguan, Ruimzicht, MARDS and Lot 66. Each facility was also to have facilities for handling and storing 64,000 bushels of milled rice plus necessary facilities for bagging this milled rice. Other facilities at each center were to include access roads, housing, office laboratory building, shop and utility building, paddy

loadout facilities, specialized maintenance equipment, initial spare parts supply and necessary utilities. MARDS was also to have a bridge across the Mahaicony River, the moving and reconstruction of the Grantex Mill, remodeling of the existing bond and the construction of a pure line seed storage unit. Also in support of the storage centers, 50 mobile units were to be provided to facilitate bulk handling and transport of the dried paddy from storage to mills, and return of milled rice to storage.

(2) Rice Research Station

To be located on a 600 acre plot near MARDS, and with the project consisting of site development work, the construction of buildings for laboratory and field research, maintenance and housing, installation of utilities, and the furnishing of vehicles, equipment, materials and supplies necessary to initially carry out the research work for the various programs.

(3) Technical Assistance

(A) Rice Research Station

Six Guyanese technicians were to be trained in Colombia, South America, or at some other approved research institute, a U.S. firm was to be contracted to train personnel at the Station in Rice Research techniques.

(B) The contractor for the construction and equipping of the storage centers was required to furnish qualified personnel for 12 months at each center to train Guyanese in required operating and maintenance procedure.

(C) GRB

One or more U.S. Consultants were to be contracted for 24 months to assist the GRB in all phases of managerial and operational functions.

The March 11, 1969 Loan Agreement was amended on February 12, 1971, and the Description of the Project in Annex I to the Amendment was also revised. The Project Description operative since the Amendment is as follows:

(1) Paddy Drying and Storage Centers: Provides for the construction of six centers, one each at Wakenaam, Anna Regina, Ruimzicht, MARDS, Somerset-Berks and Black Bush Polder. Each center will have facilities for cleaning, grading and drying the paddy, an office and laboratory building, a shop and utility building, paddy loadout facilities, specialized maintenance equipment and initial spare parts supply, and necessary utilities. Some centers will include housing facilities and improvements to access roads.

(2) Rice Storage Center: A Milled Rice Storage Center to be constructed in Georgetown with facilities for bagging the milled rice for shipment and a capacity to handle and store 3,500 metric tons of rice.

(3) Transport: To transport paddy to the paddy storage center, to rice mills and to the Milled Rice Storage Center, the following are to be provided

- a) conveyor systems at each storage center
- b) paddy handling units to facilitate loading and unloading at the mills
- c) containers to be mounted on trucks for bulk transport of paddy from farms to the storage centers, to mills not serviced with a conveyor and for bulk transport of milled rice from mills to the Milled Rice Facilities.

(4) Rice Research Station: There is essentially no change from the original Agreement.

(5) Technical Assistance:

- A) Paddy Drying and Storage Centers: No change.
- B) Rice Research Station: Technical assistance will be provided with regard to staffing arrangements and administration and operating procedures for the Rice Research Station. Additionally,

technical assistance will be provided for the development of a research program, and for the training of the staff.

(C) GRB: Training is to be provided for appropriate employees of the GRB in rice milling techniques, sanitation techniques, management processes, foremanship, mechanical maintenance, spare parts inventory control, and international rice marketing. Technical assistance is also to be provided the GRB in designing a modernized system of accounting and records, and in job evaluation. Two full-time Consultants were to be provided, one in maintenance, and the other in milling technology and rice system management.

(D) Miscellaneous: The Anna Regina and MARDS rice mills were to be renovated, and a pure line seed storage unit constructed at MARDS.

D. Project History

The Agency for International Development authorized a Loan to the Government of Guyana on November 27, 1968, in the amount of US \$12.9 million. At the time of the Loan, the Burnham Government was very concerned about high unemployment and the narrow economic base of the country, and the U.S. Government wanted to help overcome these problems by financing projects with substantial employment, income, and diversification effects.

Loan 504-L-003 was the culmination of a series of feasibility studies and other U.S.A.I.D. support of the rice industry in Guyana. The US Government had earlier provided funds to finance the introduction of new seed varieties into Guyana, had financed a Management Study by Maynard Associates, and had provided other technical assistance in general and specialized fields. The basic design for the project was taken from a 1967 Economic and Engineering Feasibility Study performed by the Rhodes and Checchi Corporations under AID Loan 504-L-003. Elements of the Maynard Study and other work done in the sector also were incorporated into the project design.

The Loan Agreement was signed on March 11, 1969, and the conditions precedent to disbursement were met in stages by the end of 1970 (although the C.P's to disbursement for technical assistance were met in late 1973).

Nance Engineering Company was originally contracted to review the plans and specifications contained in the Rhodes Feasibility Study. After Nance's contract was terminated, the Nance Project Manager Mitchell, formed a company and acted in the capacity of Consultant for a short period of time. The Guyana Rice Board contracted with Weitz-Hettelsater on November 17, 1970, to provide necessary engineering services for the inspection and supervision of construction and run-in tests at the six Drying/Storage facilities.

This contract has now been amended a total of eight times. Engineering services include design, drawings and specifications for the Milled Rice Facility in Georgetown as well as for the six Drying/Storage facilities. The engineering firm currently under contract is Black and Veatch International, a subsidiary of Black and Veatch, Inc., of Kansas City, Kansas. Cost of these services has risen from the original contract ceiling of US \$547,324 in dollar costs and the local currency equivalent of US \$109,021 to the current level of US \$1,883,340 and local currency equivalent of US \$123,790 to cover local expenses.

A turnkey construction contract was signed with Pemar, Inc., of Florida on March 19, 1970, in the amount of \$8,190,000 (including foreign exchange US Dollar costs of \$7,371,000) for the following -

- A) Supply and installation of materials and equipment at six centers;
- B) Provision of one person at each site for training;
- C) Supply of 50 paddy wagons;
- D) Supply and installation of materials to complete certain other facilities at a seventh site.

Many aspects of the work of the Pemar contract were unsatisfactory to the Guyana Rice Board and the Weitz Company (the GRB's engineering consultant), prepared a brief for default of contract in March 1973, outlining areas where the contractor had failed to meet the requirements of the contract. The areas specified in the brief are -

- A) Failure of Pemar to begin work within the time specified;
- B) Failure of Pemar to perform the work with sufficient capable management, drawings, workmen, equipment, or materials to complete the work within the specified time;
- C) Failure of Pemar to perform the work in a suitable manner as determined by the Engineer.
- D) Failure of Pemar to follow safety requirements of the contract;
- E) Failure of Pemar to follow sub-contracting procedures stipulated in the contract; and
- F) Failure to honor commitments covered by the prequalification questionnaire.

Shortly thereafter, the GOG acted to terminate the contract under Section 3.63 - Termination for Breach, and Section 3.64 - Termination for Default - of their contract.

Legal light years have ensued since the termination action, with several suits and countersuits having been filed, one suit and countersuit settled, and arbitration proceedings in Guyana between the Guyana Rice Board and Pemar likely to begin in late 1976.

Pemar substantially completed four of the six drying/storage facilities before the contract was terminated, and purchased substantial amounts of materials and equipment for the remaining two sites. Neither the Engineer nor the GRB ever accepted any of the storage/drying facilities, however, due primarily to the failure of the cleaners to meet capacity requirements, the persistence

of leaks in the tanks, as well as the six factors cited above from the Weitz brief for default. In early 1974, the Guyana Rice Board requested A.I.D. approval to proceed with construction of the remaining drying/storage facilities by force account, and to proceed also with the construction of a Milled Rice Storage Facility in Georgetown. The Georgetown facility was substituted for milled rice storage units at the drying/storage centers in the Amendment to the Loan Agreement (Revised Annex No. 1).

Since the decision of the Guyana Rice Board to terminate the contract and proceed with force account construction, the Black Bush Polder facility has been substantially completed, the Somerset-Berks facility started, the storage silos at the Milled Rice Facility (MRF) erected, and the work initiated on the MRF headhouse. Black and Veatch International is responsible for design, supervision of construction and run-in tests for the facilities and BVI and Watson Engineering for the design of the MRF.

All project procurement is expected to be complete by the Project Terminal Disbursement Date of March 31, 1977, although some finishing and run-in tests are likely to be required at the MRF after this date. In any event, A.I.D. will certainly have residual monitoring responsibilities and Black and Veatch International services may be required after the March 31 date.

III. CURRENT STATUS

A. Physical Completion and Implementation

This storage/drying facility is approximately 80 percent complete, with some finishing work such as painting, installation of cabinets and shelves, painting and completion of several auxiliary buildings. Installation of catwalks on the new C and D silos is in progress, as is installation of conveyors to the rice mill. Work on the approach roads is expected to be completed within three months after the heavy rains stop in August. Drying and storage of the Spring crop is currently underway using two dryers. Parts for a third dryer unit have been ordered, and the third dryer is expected to be in operation in time for the Fall crop.

Somerset & Berks

The Guyana Rice Board of Directors decided to resume work at Somerset & Berks following the visit of Dr. Osterberg to investigate the subsidence problems at that site. Assembly of the storage silos is largely completed, but work on the headhouse and other site facilities is barely started. The GRB hopes to finish the facility by March 31, 1977. Overall, the facility is approximately 20 percent completed.

Georgetown Milled Rice Facility

This project element was scheduled for completion by the current TDD of the Loan, March 31, 1977. Delays caused by failure of the contractor responsible for excavation, pile driving, and sheet pile driving has caused this activity to fall behind the completion schedule by at least three months. A further complication is that the test pile failed, and the engineers have recommended that seven additional piles be driven. It is almost certain that the Milled Rice Facilities will not be finished according to schedule, and that the contract of BVI will have to be extended through the initial start-up and performance tests.

Other Storage/Drying sites and Subsidence Problems

There are four storage/drying sites aside from Black Bush Polder and Somerset and Berks that were contracted to Pemar for construction. These are - Anna Regina, MARDS, Ruimzicht and Wakenaam. Pemar was never able to meet their contractual obligation to produce a facility that was acceptable to the Engineers and the GRB; the reluctance of the Engineer to accept any facility was probably the primary reason that Pemar abandoned work. Although no site was ever accepted, Pemar and the GRB did enter into a Supplemental Agreement on June 27, 1973, in which Pemar agreed to achieve "substantial mechanical completion" of the facilities. Although this was certified as having been achieved, the GRB elected to terminate the Pemar contract, and the respective sides have been preparing their briefs for the pending arbitration.

There are still severe leakage problems at all of the four sites which have not been corrected by the application of caulk or other sealants, and which could, in the final analysis, require placement of a roof over the storage silos, or dismantling and re-erection of the tanks most severely affected. Allowances for past damages and presumably for future corrective measures will presumably be made in the arbitration proceedings. The four storage/drying facilities are operating at or near full capacity despite the leakage; the main problem being encountered now is the loss due to leakage, and the additional expense of more frequent aeration and/or additional drying when excess leakage into the tanks necessitates this remedial action.

Another problem currently plagues the Wakenaam facility - soil subsidence that has caused significant tilt in several tanks, has damaged the overhead catwalks and conveyor systems, and will necessitate substantial remedial actions in the future (redesign of the superstructure, jacking of many of the storage tanks, and possibly other measures). The use of the Wakenaam facility was severely circumscribed during March, April and May since it was felt that there might be the possibility of collapse of one or more tanks; the likelihood of this is now discounted, and the storage tanks are being used to full capacity. During jacking, however, the tanks will probably have to be empty, thus limiting the usefulness of the storage tanks during this operation.

Rice Research Station

The Rice Research Station at MARDS has been substantially completed (buildings, laboratory facilities, etc.), and all Loan-financed commodities have been delivered. Several pieces of tillage equipment that were purchased for the Station had to be modified slightly to enable them to operate properly on the very thick clay soils with high moisture content.

Transport Systems

The Project calls for approximately fifty Paddy Wagons to be built to serve two functions: transport behind tractors from the field to the storage/drying centers, and transport of milled rice from the storage/drying centers to the Milled Rice Facility in Georgetown. The materials for the paddy wagons have arrived

and the construction of 10 wagons has been contracted to Industrial Engineering Limited. Conveyors have been procured for all storage/drying sites with the exception of Somerset & Berks (this procurement is in process) to provide proper transportation of paddy and milled rice between the storage silos and the rice mills at each site.

B. Training

Pemar was supposed to provide operations and maintenance training at each site, but their program was never recognized as satisfactory by either the Consultant or the GRB. A training program estimated to cost approximately US \$300,000 was developed in 1975, and consisted of a managerial course conducted in Guyana, two technical courses to be conducted in Guyana, and participant training for seventy-eight GRB employees. Thirty-four participants have completed their training, four are currently in the U.S. on training courses, and three senior executives are scheduled to depart for training in 1976. The managerial course has also been completed in Guyana. The GRB in June analyzed the results of the training course and determined that some of the persons chosen for training and some of the training received were not appropriate. The GRB accordingly requested a rescheduling of the training program as well as some changes in the persons that would attend various courses and the courses to be taken. USAID is making arrangements for the revised training program. Annex "A" indicates the status of participant training under the Loan.

C. Technical Assistance

Attached as Annex "B" to this review/evaluation is the Performance Evaluation Report on the GRB's Consultants - Black and Veatch, evaluating the Contractor's services and giving the current status of their services.

At USAID's request the Area Auditor General's Office in Washington audited the books of both Black and Veatch International and their subcontractors, Watson Engineering. Audit Report No. 76-362 was forwarded to USAID with recommendations for action. The USAID analysis of the audit recommendations and action taken by USAID are attached as Annex "C" to this paper.

D. Procurement/Financial Status

Procurement under the Loan continues at a rapid pace. Disbursements for the six month period ending June 30, 1976, were approximately \$1.5 million, and for the year ending June 30, 1976, totalled \$2,015,000.

The major items remaining to be procured are conveyors and elevators for Somerset-Berks, conveyors for the Milled Rice Facility, and machine shop tools and equipment for the central maintenance facility. A detailed list of items to be procured but not yet paid for is attached as Annex "D". DRA's 504-L-00813 at \$3,482,000 and 504-L-00827 at \$650,000 contain the bulk of undisbursed funds under the Loan (all Loan funds are fully committed).

Table III shows the loan financing documents, amount authorized for each document, accrued expenditures and unliquidated balance for each commitment document.

Loan funds presently remaining under DRA 504-L-00813 to be allocated for procurement are approximately \$83,000. Additional funding will be forthcoming from DRA 504-L-00827 currently valued at \$650,000, but scheduled to be reduced to a new level of \$420,000. The GOG had decided not to open an irrevocable Letter of Credit as requested by A.I.D. Thus, \$420,000 will be frozen in DRA 504-L-00827 until further notice. Some additional funds may be available under DRA 504-L-00822 valued at \$300,000 for training. The amount available, if any, will depend on the Final Review in October of the training needs of the GRB.

Table IV demonstrates the application of funds originally planned for the project and the current application thereof.

TABLE III

AID LOAN NO. 504-L-008, RICE MODERNIZATION PROJECT

STATUS OF LOAN FUNDS
at June 30, 1976

| <u>AUTHORIZATION NO.</u> | <u>EXPIRATION DATE</u> | <u>SERVICES/SUPPLIES</u> | <u>AUTHORIZED AMOUNT</u> | <u>ACCRUED EXPENDITURES</u> | <u>UNLIQUIDATED BALANCE</u> |
|--------------------------|------------------------|-----------------------------------|--------------------------|-----------------------------|-----------------------------|
| L/COM 504-L00801 | 9-30-72 | Supervisory engineering services | 40,120.92 | 40,120.92 | -0- |
| DRA 504-L00802 | 3-31-77 | Engineering services | 96,563.67 | 96,563.67 | -0- |
| L/COM 504-L00803 | 9-30-71 | Construction of foundations | 911,312.00 | 911,312.00 | -0- |
| DRA 504-L00804 | 7-31-73 | Participant training | 6,542.16 | 6,542.16 | -0- |
| DRA 504-L00805 | 3-31-77 | Communications equipment | 4,630.43 | 4,630.43 | -0- |
| L/COM 504-L00807 | 3-31-74 | Construction contracting services | 5,355,101.58 | 5,355,101.58 | -0- |
| L/COM 504-L00808 | 6-30-71 | Commodities | 22,146.42 | 22,146.42 | -0- |
| L/COM 504-L00809 | 3-31-76 | Supervisory engineering services | 1,017,586.60 | 1,017,586.60 | -0- |
| DRA 504-L00810 | 3-31-77 | Cement purchases | 10,233.25 | 10,233.25 | -0- |
| L/COM 504-L00811 | 12-31-72 | Commodities | 97,802.69 | 97,802.69 | -0- |
| L/COM 504-L00812 | 2-28-72 | Construction services | 50,373.88 | 50,373.88 | -0- |
| D.A. 504-L00813 | 3-31-77 | Commodities | 3,482,898.15 | 2,283,237.72 | 1,199,660.43 |
| DRA 504-L00817 | 3-31-77 | Commodities and services | 11,085.44 | 11,085.44 | -0- |
| D.A. 504-L00818 | 3-31-77 | Engineering services | 66,803.05 | 66,803.05 | -0- |
| L/COM 504-L00819 | 3-31-77 | Supervisory engineering services | 556,544.00 | 390,220.79 | 166,323.21 |
| L/COM 504-L00820 | 3-31-74 | Commodities | 159,102.23 | 159,102.23 | -0- |
| DRA 504-L00821 | 3-31-77 | Commodities | 61,153.53 | 61,153.53 | -0- |
| DRA 504-L00822 | 3-31-77 | Training program | 300,000.00 | 116,135.55 | 183,864.45 |
| DRA 504-L00827 | 3-31-77 | Commodities and services | 650,000.00 | -0- | 650,000.00 |
| TOTAL LOAN AMOUNT | | | 12,900,000.00 | 10,700,151.91 | 2,199,848.09 |

NOTE: The final commitments and disbursements dates under the loan are December 31, 1975 and March 31, 1977 respectively

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TABLE IVU.S. DOLLAR COMMITMENTS AND ACCRUED EXPENDITURESCOMPARED WITH ORIGINAL ESTIMATES

| | <u>Original Estimates</u> | <u>Committed 4/30/76</u> | <u>Accrued Expenditure 4/30/76</u> |
|-----------------------------------|---------------------------|------------------------------|--|
| Rice Research Station | 565,000 | 527,367 | 524,112 |
| Six Drying/Storage Centers | 9,812,000 | 7,231,694 | 7,127,729 |
| Milled Rice Facility | -0- | 2,720,057 | 678,098 |
| Technical & Management Assistance | 550,000 | 306,542 | 83,878 |
| Engineering Services | 285,000 | 1,883,340 | 1,584,457 |
| Contingencies | 1,188,000 | -0- | -0- |
| Paddy Wagons | <u>500,000</u> | <u>231,000</u> | <u>197,145</u> |
| | <u>12,900,000</u> | <u>12,900,000</u> | <u>10,195,419</u> |

IV. EVALUATION

Introduction

The evaluation of this project is complicated by a number of factors, including (1) the original project design had only a limited number of progress criteria and end-of-project conditions, (2) the time span originally expected (3 years) has been far exceeded, and many assumptions are no longer valid, (3) the social and economic functions of the Government have changed significantly, thus altering significantly the role of the private sector in Guyana and some of the perspective in which this project was conceived and is being carried out, (4) the world-wide economic upheavals of the early 70's necessitated some changes in project design, and (5) unanticipated subsidence problems at two sites have caused delay in construction at one site, and (6) problems with Pemar have resulted in a number of problems at the completed sites, have caused substantial delay at all sites, have significantly escalated the cost of the project and have resulted in the GRB constructing the last three facilities by force account.

Notwithstanding these complications, it is felt that a viable evaluation can be accomplished at this juncture. The evaluation accordingly focuses on two areas: (1) the present status of the project relative to the targets and impact areas set forth in the Loan Agreement, Amendment No. 1 to the Agreement, Implementation Letters and other documents; and (2) the development of End-of-Project Status indicators against which a final project evaluation can be made. Annex "E" lists Implementation Letters issued to date.

A. Project Objectives/Impact Areas

Table V below taken from the original Capital Assistance Paper shows the activity areas that were expected to be significantly affected by the project.

TABLE V

| <u>Activity</u> | <u>Present</u> | <u>Proposed</u> |
|------------------------|------------------------------|---|
| Research | Very Little | GRB* |
| Seed Production | Individual Farmers | GRB & Individual Farmers* |
| Extension | Min. of Agriculture | No change |
| Production Credit | Various | No change |
| Paddy Drying | Various - Primitive | Various and GRB* |
| Paddy Storage | Farmers, Millers & GRB | New GRB facilities * for 1/3 of the crop |
| Parboiling | Private Millers & GRB | No change |
| Milling | 2/3 Private Mills 1/3 GRB | No change |
| Storage of Milled Rice | Millers, GRB | Partial conversion to Paddy Storage* |
| Domestic Sales | GRB | To be decontrolled* |
| West Indies Sales | GRB | Eventually to be decontrolled |
| Other Foreign Sales | GRB, Connell Grain | GRB & Connell Grain* |
| Pricing | Government | Government* |
| Transport | Private | Partial improvement* |
| Production | Individual Farmers | No change |

* Changes directly related to this project.

A number of Goal, Purpose and Output Objectives are specified in the Loan Agreement and Amendment, Implementation Letters, and numerous other documents. These objectives, including the areas expected to be affected as shown in Table III, their indications at the Goal, Purpose and Output Levels, and an Evaluation of each follow.

Goal Level

Objective # I

Help achieve a 7 percent growth rate in Gross Domestic Product^{1/}.

Indicators (I)

Rate of growth of Gross Domestic Product.

Evaluation

Table VI below shows GDP^{1/} at factor cost from 1969 to 1977.

1/ GDP = Value of goods and services produced domestically.

TABLE VI

Industrial Origin of Gross Domestic Product (Factor Cost at 1972 Prices),
(Contribution of Rice from Production and Manufacturing)

| <u>Year</u> | <u>GDP Total G \$ Million</u> | <u>Rice G \$ Million</u> | <u>Percent Contribution of Rice</u> |
|-------------|-----------------------------------|------------------------------|---|
| 1969 | 438 | 13.0 | 3.0 |
| 1970 | 467 | 17.1 | 3.7 |
| 1971 | 495 | 14.1 | 2.8 |
| 1972 | 530 | 13.0 | 2.5 |
| 1973 | 582 | 17.0 | 2.9 |
| 1974* | 632 | 21.0 | 3.3 |
| 1975* | 691 | 25.0 | 3.6 |
| 1976# | 758 | 29.0 | 3.8 |
| 1977# | 837 | 33.0 | 3.9 |

Source: Data from Ministry of Economic Development and Bank of Guyana Economic Bulletin No. 9, Page VIII, 6, dated October 1975.

* Estimates

Projected

The increase in GDP between 1969 and 1975 was 57 percent at constant 1972 prices, or an average of roughly 8 percent per year. Thus the economic performance as a whole was higher than the 7 percent targeted in the 7-Year Development Plan formulated in the late 1960's. The value of rice production during the same interval increased by 92 percent, or an annual increase of slightly more than 11 percent, and contribution of rice to GDP rose from 3.0% in 1969 to 3.6 percent in 1975. Rice has therefore contributed more than its share to the growth of GDP, which itself has grown at a rate greater than originally projected. Rice is expected to contribute 3.9 percent of the total GDP in 1977, illustrating the increasing importance of rice to the Guyanese economy.

Indicator II (Indirect indicator of benefit incidence)

Increases in amounts of improved varieties grown and income received by farmers.

Evaluation

There has been a significant increase in the growth of improved varieties in Guyana, such that in 1976, an estimated 90 percent of all rice grown is of improved varieties. This is a major change from 1970 when approximately half of all rice was of improved varieties. This is important because a farmer can expect to increase his per acre yield from 13-20 bags (140 lbs/bag), and his net returns per acre from G \$90.50 to \$170.94 by utilizing improved varieties of seed and improved practices. This is by no means a high level of production, and is often exceeded by progressive farmers. Nevertheless, the average production/acre in Guyana is 16 bags, which means that the returns per acre to the farmer from one crop would be more in the neighborhood of G \$150.00. (See Table VII, below).

TABLE VII

Cost of Producing (G \$) One Acre of the Traditional (Trad.) Variety with No Improved (Imp.) Practices Compared with Costs and Returns per acre of Star-Bonnet Paddy, Guyana Coastal Areas for the 1976 Fall Crop

| Item | Unit | | Quantity | | Price | | Value | |
|--------------------------------------|-------------------------------|------------------------------|-------------|------------|----------------|---------------|-----------------|----------------|
| | Trad. 140 lb Bags-Paddy | Imp. 140 lb Bags-Paddy | Trad. 13 | Imp. 20 | Trad. 16.60 | Imp. 18.00 | Trad. 215.80 | Imp. 360.00 |
| Land Preparation | 1 acre | 1 acre | 1 | 1 | 40.00 | 40.00 | 40.00 | 40.00 |
| Seed | 16 | 16 | 90 | 90 | .17 | .17 | 15.30 | 15.30 |
| Fertilizers - T.S.P. | - | Cwt | - | 1.0 | - | 17.54 | - | 17.57 |
| Vred | - | Cwt | - | .5 | - | 15.72 | - | 15.72 |
| Herbicides | - | - | - | - | - | 2.50 | - | 2.50 |
| Plant Protection | - | - | - | - | - | 3.50 | - | 3.50 |
| Harvesting | Bags | Bags | 13 | 20 | 2.00 | 2.00 | 26.00 | 40.00 |
| Transportation to Mill | Bags | Bags | 13 | 20 | .65 | .65 | 13.00 | 13.00 |
| Labor/Broadcasting Seeds Drainage | - | - | - | - | 2.50 | 2.50 | 2.50 | 2.50 |
| Drying | Bag | Bag | 13 | 20 | .25 | .25 | 3.25 | 5.00 |
| Int. on Operating Capital | G \$- | G \$ - | 100 | 100 | 9.00 | 9.00 | 9.00 | 9.00 |
| Cost of Bags - 50% of Price | Bag | Bag | 13 | 20 | 1.25 | 1.25 | 16.25 | 25.00 |
| TOTAL COSTS | | | | | | | 125.30 | 189.06 |
| Gross Crop Value/Acre | | | | | | | 215.80 | 360.00 |
| Production Costs/Acre | | | | | | | 125.30 | 189.06 |
| Returns to Land and Labor/Acre | | | | | | | 90.50 | 170.94 |

SOURCE: Sam Persaud, Plant Manager, GRB New Amsterdam; Mr. Allin, Extension Black Bush Polder and Mr. Leon Dundas, Snr. Regional Manager, GRB Skeldon; Rice Farmers in the area; Charles Kennard, GRB Georgetown.

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It is not possible to compare the per capita incomes of rice farmers before and after the project since no base line data specific enough to be utilized for comparisons were collected. In fact, however, GOG economists feel that rice farmers in Guyana are 'better off' in economic terms than are other farmers. The reasons for this are several -

- 1) An average net yield of G \$150.00/acre is for only one crop; approximately half of the rice farmers now plant two crops, thus giving an annual net per acre income of G \$300.00. (See Table VII above for details on costs of production and returns to farmers).
- 2) Many rice farmers have plots of 15 acres plus up to two acres which can be utilized for food crop production. The combination of a good money income from the production and sale of rice and food crops, coupled with the production for household consumption of animals, animal products and food crops gives these farmer families a real income above that of the average Guyanese.
- 3) The income of most rice farmers is relatively stable since there are adequate amounts of credit, seeds and machinery available and there is a guaranteed market for their production. The main variable, of course, is the weather, which resulted in lower total production in 1973 and will severely affect rice farmers' income in 1976.
- 4) The rice farmers are generally considered to be more progressive, better educated, and more willing to invest and innovate than are most other farmers in Guyana. Whether this is the explanation for their relative prosperity or the result of it, is an arguable point, but nonetheless their economic situation is reasonably good, and promises to improve further.

Objective # II

Maximize foreign exchange earnings.

Indicator

Rice exports and amount of foreign exchange earnings from rice.

Evaluation

Table VIII below* shows Foreign Exchange earnings from 1969-1974, and the contribution of rice to these earnings.

TABLE VIIIGuyana \$ Million

| <u>Year</u> | <u>Exports Total</u> | <u>Exports Rice</u> | <u>Rice as a % of Total</u> |
|-------------|--------------------------|-------------------------|---------------------------------|
| 1969 | 252.9 | 19.2 | 08 |
| 1970 | 264.8 | 18.1 | 07 |
| 1971 | 290.9 | 21.3 | 07 |
| 1972 | 299.9 | 25.3 | 08 |
| 1973 | 288.0 | 25.0 | 09 |
| 1974 | 600.0 | 49.0 | 08 |

*Source: Bank of Guyana Economic Bulletin
Table VII, dated October 4, 1975

Rice has helped in the growth of export earnings during 1969-1974, contributing an average of 8 percent per year to export earnings. The contribution to export earnings (03%) compared to the average contribution to Gross Domestic Product (03%) demonstrates the importance of rice as an export earner compared to other products in the Guyana Economy.

Purpose Level

Objective (I)

Modernize all phases of the Guyana Rice Industry.

Sub-Objective (I)

Reorganization and restructuring of the Government Rice Board.

Indicators

- 1) GRMB and GRDC merged into one organization.
- 2) New Government Rice Corporation profitable.
- 3) GRB debt restructured.

Evaluation

The GRMB and GRDC were merged into a new organization called the Guyana Rice Corporation (GRC) which subsequently changed its name to the Guyana Rice Board (GRB).

The debt of the Government Rice Organization was consolidated and assumed en toto by the GRB as a Condition Precedent to Disbursement of the Loan. This has led to a more streamlined financing apparatus, but has not of itself helped to make the GRB a profitable concern. Analysis of documents available from the GRB, including estimated 1975 cash flow figures and GRB

profit and loss statements and balance sheets through September 1974, indicate that the GRB is in a rather difficult financial position, with prospects that their position will become more serious over the short run. The main conclusions that can be tentatively drawn are -

- a) The GRB had a cash deficit of G \$30 Million as of September 1975. Shortage of operating capital is thus a critical problem and, with the prospect of a sub-normal 1976 crop, the problem is likely to be aggravated further. The GRB cash balance is financed by bank overdrafts through the Guyana National Cooperative Bank and the Royal Bank of Canada. Assuming that operating capital will continue to be made available, which is a reasonable assumption given that Government Banks will certainly support other Government enterprises, there is no reason to expect the GRB to be unable to meet its current expenses. However, upon completion of this project, a detailed financial analysis of the GRB should be undertaken to determine the long-range prospects of the GRB, and to evaluate whether the Project Objective of the GRB being a profitable organization was or is realistic.
- b) The GRB is required under the Trust Agreement to repay principal (after 5 years) and interest to the Government for Loan funds utilized. Payments have been due for more than one year, but none have been made, and there has apparently been no pressure on the GRB to pay. Repayments to the GOG (Borrower) would have to be financed by additional overdrafts; a prospect which is not appealing to the GRB.
- c) The GRB, despite its serious cash flow problems, has always been able to finance contracts and procurements necessary to fulfill its obligations under the Loan Agreement. No definitive statement can be made relative to the future ability of the GRB to finance all local currency requirements, but past experience with the GRB indicates that they relegate sufficiently high priority to the project elements that any needed monies will be forthcoming. It is concluded that the cash flow situation, although serious, does not require any remedial action at this time.

Sub-Objective II

Enable the GRB to compete in the world market.

Indicators

- 1) Physical facilities sufficiently modern to allow efficient storage, transport and milling.
- 2) Modern management structure for GRB acquired through technical assistance and training.

Evaluation

The four completed storage facilities, two storage facilities and milled rice facility under construction have been designed to provide efficient receiving and storing of paddy and milled rice. The GRB is providing milling facilities at each site to further rationalize the processing and export process. The modern design, expanded capacities and improved quality of rice, have enabled Guyana to export increasing amounts of rice and to better establish itself in export markets.

Three senior GRB executives have completed a one-month executive development training course, four GRB executives are now enrolled in courses in auditing, credit and field services, public administration, and personnel and industrial relations, and three senior executives are scheduled to receive training in industrial engineering (1), and business administration (2). A management training course was also conducted in Guyana for senior employees of the GRB. Thus, most of the management training originally scheduled has been or is being carried out.

Sub-Objective III

Research to fill Guyana's needs.

Indicators

- 1) Physical plant completed (Research Station).
- 2) 600 acres of test plots and trials being conducted.
- 3) Rice of high yield and varieties suitable for Guyana being produced, introduced and grown.
- 4) Staff and budget are adequate to meet needs of Research Station.

Evaluation

Research activities of the GRB are carried out primarily at the Research Station at MARDS under the direction of the Research and Extension Division of the GRB. Other research activities assigned to GRB are those in adaptive wheat trials, potatoes and black-eye peas at the two outreach stations of Moblissa and Black Bush. Research activities include plant breeding, agronomy, entomology, extension techniques, and paddy production. The physical plant at the Research Station is essentially complete and with the exception of a small amount of laboratory equipment, all A.I.D.-financed equipment for the Station has arrived. Staffing for the Research Station is not adequate, with only 4 of 8 professional and 15 of 24 sub-professional positions filled. Research Station personnel feel that adequate staff for the Center is its most critical problem. One GRB employee has received participant training and is currently working at the Research Station. Five others are scheduled to receive training, and one is scheduled for plant breeding training at CIAT. Training on the job is being given to operators of new equipment at the Station as it is assembled and placed in operation. This training for technical staff is being given by one well-qualified person, thus making progress slow but sure and perhaps the best approach to utilizing the expensive and delicate test equipment.

There are 60 acres of test plots at the Station and 480 acres in foundation seed plots. The 600 acre target has nearly been reached.

Much more difficult to evaluate is the trial program and the efficacy of the research efforts. There are currently 15 plant breeding trials, 6 agronomy trials, and 7 entomology trials in progress. Much of the research results and procedures used have been reviewed by Dr. Chandranata, a well recognized agronomist with world-wide experience in rice breeding, and who is currently in charge of a new GOG rice development scheme (Tapakuma). From a number of long grain rice varieties which have been extensively tested and improved upon for Guyana's rather rigorous growing conditions including salt tolerance and blast resistance, one variety, 'N', was released in December 1974. Due to its shorter growing period as well as its superiority in all other aspects, 'N' is expected to be grown on 20-30,000 acres in the current crop season. In the recent harvest, seed production on the MARDS Station alone has produced 6,000 bags with a value of \$145,000.

There has been an increase in the percentage of improved varieties planted each year. A significant amount of the foundation stock had traditionally been imported, but the Government now grows breeders and foundation seed stock at the Research Station and certified seed on the other GRB farms are adequate to meet 50% of the national demand. Registered private farmers produce the other 50%. In recognition of GRB's work in breeding and testing salt tolerant lines and that done on blast resistance, CIAT has invited a presentation of the GRB rice research program at its world-wide Rice Breeders Conference this Fall.

Future evaluation of the research program, if done by an outside institution, would without doubt be of value to the GRB due to the additional expertise and inevitable recommendations for improvement and should be encouraged if only in the form of visits by rice experts and continued liaison with the international rice research centers. Bearing in mind that farmers have been rapidly accepting the newly developed rice varieties and that farmers are generally slow and cautious in changing their habits, research results have been self-evident in increased yields and income.

In 1970, only 8 percent of the rice grown was produced from improved varieties. In 1975, 70 percent was of the improved type and in 1976, 90 percent improved rice varieties are being produced. In addition, more varieties of improved rice are being grown, suggesting both development and availability of varieties suited to highly localized conditions and specific needs of farmers. Contact with International Research Centers, CIAT/IRRI has been maintained and newly developed varieties are secured for further adaptive testing in Guyana. CIAT rice research staff visit periodically.

Sub-Objective IV

Provide the means for the private sector to participate in the upgrading process.

Indicators

- 1) Loans from Private Investment Fund.
- 2) Number of private mills, and capacity of these mills (absolute and changes).
- 3) Production of rice by private sector.
- 4) Custom milling of GRB paddy by private millers on an incentive basis.
- 5) GOG give private sector access to wholesale, retail, and export markets.

Evaluation

The economic/social role of the GRB in Guyana has changed considerably in the period between 1968-69 and the present. The GRB now markets all rice both internally and externally, and there are no indications that this will change. The reasons for this are several, including GOG emphasis on State Corporations as a means of promoting socio-economic development, and the feeling that economies in the Rice Industry could best be introduced by the GOG.

The GRB has slightly expanded its role in milling, as demonstrated by the Figures in Table IX below.

TABLE IX

Private and GRB Milling Units And Capacity (Tons/24 Hrs)

| <u>Year</u> | <u>Type of Mill</u> | <u>Mills Private</u> | <u>Capacity</u> | <u>Mills GRB</u> | <u>Capacity</u> | <u>Total Capacity</u> |
|-------------|---------------------|----------------------|-----------------|------------------|-----------------|-----------------------|
| 1969 | [Total Capacity] | 200 | 151 | 2 | 10 | 161 |
| | Single Stage | 137 | 68 | 0 | - | 68 |
| | Multi-Stage | 63 | 83 | 2 | 10 | 93 |
| <hr/> | | | | | | |
| 1975 | [Total Capacity] | 148 | 136 | 7 | 22 | 158 |
| | Single Stage | 78 | 34 | 0 | - | 34 |
| | Multi-Stage | 70 | 102 | 7 | 22 | 124 |
| <hr/> | | | | | | |

Private sector capacity declined slightly between 1969 and 1975, while the GRB capacity doubled. Total capacity remained nearly constant, however, and private millers still have a far greater productive capacity (86%) than does the GRB (14%). The development of efficient drying and storage units has had a marked effect on the efficiency of the milling business. There is no longer a need for milling capacity adequate to mill the paddy that is produced in the Fall crop in a very short time. Drying and storage means that paddy can be milled over a longer time period, thus permitting a much more rational utilization and investment in rice milling. Total milling capacity is considered to be only marginally less than required to meet current and near future requirements.

The lack of growth of milling capacity is accordingly a somewhat surprising indicator of the value of the drying/storage facilities and the indirect benefits that have accrued to the Rice Industry and the economy. The future of private millers is not clear, since the GRB is becoming increasingly active in this area, and since many millers complain about low profits from their mills. Nonetheless, there is no reason to expect that the private sector will soon lose its dominance in this area.

Five Guyanese were given loans from the Private Investment Fund (financed in part under Loan 504-L-002) that were related to rice.

| <u>Date</u> | <u>Borrower</u> | <u>Amount (G \$)</u> | <u>Purpose</u> |
|-------------|-----------------|----------------------|----------------------------|
| 1968 | K. Sankar | 240,000.00 | Rice Mill, Storage Bins |
| 10/4/68 | D. Lawrie | 40,000.00 | Rice Mill |
| 11/18/69 | J. Fredericks | 61,500.00 | Rice Dryer |
| 12/08/69 | I. Bacchus | 60,000.00 | Rice Dryer |
| 1971 | E. Doobay | 84,000.00* | Mill/Dryer |

* Never disbursed

Three of these loans were approved subsequent to execution of the Loan Agreement, although the last loan, to E. Doobay, was never disbursed. There was clearly an intent to utilize the Private Investment Fund to promote the role of the private sector in rice processing. However, the Fund, for reasons not currently clear, has not been utilized since November 1971, and it may be concluded that, although an attempt was made to promote the private sector role through the use of this project, the attempt was not major and the net effect insignificant.

Project Outputs

Output #1

Six paddy storage/drying centers.

Indicators:

- a) 4,500 to 10,000 metric tons storage capacity at each site, or 51,800 M.T. storage capacity total. This should be adequate to store 1/3 of the white rice crop.
- b) 1,200 bu/hr capacity at each site (includes cleaning, drying, grading).
- c) Housing facilities and roads at 'some centers'.

Evaluation

All storage centers are completed or in some stage of construction as shown below -

| <u>Site</u> | <u>Capacity</u> | <u>Status</u> |
|------------------------|-----------------|---|
| Anna Regina | 10,000 M.T./hr | Substantially completed since 1973. ^{1/} |
| Ruimzicht | 10,000 M.T./hr | " " " |
| M.A.R.D.S | 10,000 M.T./hr | " " " |
| Wakenaam ^{2/} | 4,500 M.T./hr | " " " |
| Somerset & Berks | 10,000 M.T./hr | Under construction (20% completed) |
| Black Bush Polder | 7,300 M.T./hr | Under construction (80% completed). |

Black Bush Polder is about 80% complete, and is fully operative in storage capacity (7,300 M.T.). Somerset & Berks is scheduled to be completed by the project Terminal Disbursement Date, bringing the total storage capacity of the A.I.D. project to the expected level. This capacity combined with other GRB capacity totals 112,000 metric tons, and is adequate to store 50% of the average full crop of 225,000 M.T. and 100% of the smaller Spring crop. The substantial milling capacity and private storage facilities are adequate to handle most of the large crop, and suggest that the project target of 1/3 capacity to handle 1/3 of the white rice production is far exceeded.

The handling capabilities at all sites are also adequate to meet the 1,200 bu/hr target, except for the cleaning operation, which has been hindered by a high amount of refuse and extraneous material with the rice. The GRB recognized this problem at an early date, purchased one "Super" Cleaner as a test, and has recently received A.I.D. approval to purchase five additional cleaners (reel scalpers).

^{1/} Substantial completion is the term used to describe the status of the sites pending the outcome of the Pemar/GRB arbitration. In fact, the sites are operating at full or near full capacity.

^{2/} Subsequently plagued with foundation settlement problems, but now, operating at near full capacity.

No project-related document specified what housing facilities and/or roads were to be provided. There is no evidence that Loan funds were used to provide either of these except for the pre-fabricated buildings at the Rice Research Station, which have been erected. No further evaluation of housing or roads is done.

Output #2

Milled Rice Storage Facility in Georgetown.

Indicators

- a) Existence of physical facility.
- b) Capacity to handle, store and bag 8,500 M.T. of rice.

Evaluation

The Milled Rice Facility in Georgetown has been under construction for several years, the construction of the storage silos having been done by force account by the Guyana Rice Board after the Pemar contract was terminated. The headhouse foundation is presently being constructed and the entire facility, including conveyor systems, is expected to be substantially completed by the March 31, 1977, project TDD. The storage capacity is the originally anticipated 8,500 M.T.

More detail relative to the current status of this facility is contained in Section III, Current Status.

Output #3

Transport systems improved.

Indicator A.

Conveyor systems or other transport available at each storage facility to transport paddy to adjacent mill and milled rice to shipping points.

Evaluation

A.I.D. has financed conveyor systems at all project sites. The conveyors for Somerset & Berks are being purchased and will be installed by December 1976. Paddy wagons have been designed to haul rice from the storage facilities to shipment points and to the storage center at Georgetown. The materials for construction of the first 10 wagons were sent to Industrial Engineers, Inc. Construction of these is now complete. There are still three uncleared shipments at Georgetown customs, and the GRB has requested that Commercial Export Company, the materials supplier forward invoices and other documents so that clearance can be expedited. Better transport from the six storage facilities to shipping points and to the Georgetown Storage Facility will become available as the wagons become operable.

Indicator B.

Loading/unloading facilities are provided at each site.

Evaluation

Adequate facilities are included in the design of each center, and loading/unloading capabilities are expected to be wholly adequate by the project TDD.

Indicator C.

The paddy wagons will be leased to private sector interests to stimulate the role of the private sector.

Evaluation

It is now planned that the Guyana Rice Board will have exclusive use of the paddy wagons after the rice is sold to the Guyana Rice Board by farmers. The wagons will be leased (possibly at subsidized rates) to rice farmers, however, to assist them in transporting their rice from the harvest areas to the storage/milling facilities. Construction of the wagons is far behind

original schedule, and this service will not be fully available for some time. However, construction has begun with the clearance of all final parts, the supply of paddy wagons should be adequate by the project TDD.

Output #4

Rice Research Station.

Indicator A.

Physical existence of Station.

Evaluation

The Station is 95% complete physically, and all A.I.D.-financed equipment, except for two items, has been delivered.

Indicator B.

Station is staffed and financed adequately.

Evaluation

The financing and staffing have been discussed above. Staffing at present is not adequate and is considered to be the Station's most critical problem.

Indicator C.

Research is properly done and results utilized.

Evaluation

A complete evaluation of this aspect of the Station's operations is beyond the scope of this evaluation, and would require the cooperation of a sister research institution. This would be desirable in the long run, although an intensive short-term effort might not be productive given the time required before research programs begin to bear fruit to be evaluated properly.

Output #5

Technical assistance to provide adequate facility operations and maintenance, for proper functioning of the Rice Research Station, for GRB management and operations.

Indicator A.

Operations and maintenance staff at all project facilities performing adequately.

Evaluation

Operations and maintenance training was a part of the Pemar contract (at least one trainer at each site for one year). Such training was apparently not totally satisfactory, and there were complaints by the GRB's Consultant and the GRB that the training was poor. Three GRB employees have received three months training each in operations and maintenance of scales. Operations and maintenance are generally performed by the GRB employees at each facility. The operation of the facilities is good, while maintenance appears to be only adequate. The GRB and A.I.D. have agreed to a revised training program that includes significant training for two GRB maintenance supervisors. The GRB's training needs in this area will be reconsidered again in October of this year, and additional training arranged if it is felt essential at that point. Maintenance problems are compounded by lack of spares and the current cash flow problems of the GRB, and resultant difficulty in obtaining parts.

Indicator B.

Training to enable the Research Station to function properly.

Evaluation

One participant that is scheduled to work at the Research Station has received training. The Mission Agriculture Officer and Agricultural Economist feel that despite funding and staff limitations the Station functions adequately and is making satisfactory progress. Thus there appears to be no requirement for additional training at this time.

Indicator C.

Training to enable the Guyana Rice Board to operate and manage itself more effectively.

Evaluation

Thirty-one GRB employees have received training in operations and management, and four or five senior officials are scheduled for such training in the near future. The Loan Agreement in Section 4.01 calls for the services of one or more United States consultants to assist the GRB in management and operations for two years. This has never been complied with but is not now, and has not in the past been considered necessary. The restructured training program includes additional management training for Senior GRB executives, thus further strengthening the GRB management capability. If, upon final review of the GRB's training needs (in October) it is determined that the GRB requires expatriate management assistance, the GOG will be requested to comply with this provision. There are no current recommendations for changes in the training program for GRB managers.

Output #6

Renovation of the Anna Regina and MARDS Rice Mills.

Indicator

These two rice mills have been renovated and are in operation.

Evaluation

The renovation of these two mills was a part of the original GOG counterpart contribution. The mills have been renovated and are in operation.

Output #7

Pure line seed storage unit to be built at MARDS.

Indicator

Existence of such a unit.

Evaluation

This unit has been constructed and is in operation.

B. End of Project Status Indicators (EOPS)

A comprehensive list of EOPS indicators has not previously been compiled for this project, and a major goal of this review/evaluation is their development. These indicators are based on original project objectives, intended areas of project impact, developments since the project was conceived, and expected occurrences through project completion.

| <u>Goal Level</u> | |
|--|---|
| <u>Objective I</u> | <u>Indicator(s)</u> |
| Continued growth rate of 7% in GDP. | <ol style="list-style-type: none"> 1. Rate of growth of GDP. 2. Increasing amount of rice produced, net income increased equal to average increase for economy. |
| Increased income for rice farmers. | <ol style="list-style-type: none"> 1. Stable income for rice farming families. |
| Increase of 1% per year in export earnings attributable to rice. | <ol style="list-style-type: none"> 1. Export earning figures. |
| <u>Sub-Objective I</u> | |
| Reorganized and restructured Rice Board. | <ol style="list-style-type: none"> 1. Improvement in cash flow. 2. GRB able to begin repayments to Borrower. 3. Management participant trainees working at GRB. 4. Accounting system improved and functioning properly. |
| <u>Objective II</u> | |
| GRB able to compete effectively in world market. | <ol style="list-style-type: none"> 1. Project facilities allow for efficient storage, transportation, and milling. <ol style="list-style-type: none"> a) 1,200 bu/hr cleaning b) 57,000 M.T. storage c) export sales show net profit d) export sales grow e) increase in export of white rice. |

Objective III

Indicator (s)

Adequate research program

1. 600 acre trials program and seed plots on stream and effective.
2. Continual development and introduction of improved varieties.
3. Staff and budget adequate to support Station.
4. Greater production of export-oriented white rice varieties.

Objective IV

Six completed and functioning paddy storage/drying centers.

1. Storage of 51,800 M.T. (adequate to store 1/3 of Fall white rice crop).
2. 1,200 bu/hr capacity at each site for receiving, grading, cleaning and drying.
3. All centers operate at or near capacity levels.
4. Operation, maintenance and economics of the centers are adequate.
5. Evaluation report by BVI indicates facilities operate properly.

Completed milled rice storage facility in Georgetown

1. Physical facility substantially completed and performance demonstrated.
2. Capacity to handle, store and bag 8,500 M.T. of rice.

Objective IV (cont'd)

Indicator (s)

Transport systems improved.

3. Conveyor systems to docks completed.
4. Evaluation report by BVI indicates MRF operates properly.

1. Conveyor system or other transport available at each storage/drying center.
2. Loading/unloading facilities adequate at each storage/drying center.
3. Up to 50 paddy wagons completed and in use.
4. Evaluation report by BVI concludes that transport systems are adequate.

Rice Research Station

1. All buildings completed.
2. Adequate budget and staff,
3. All A.I.D. and GOG research equipment delivered and functioning.
4. Continual introduction to farmers of improved varieties.

Trained Personnel in all phases of GRB operations

1. 13 man-months management training.
2. 2 man-months rice research training.
3. 22 man-months rice processing and milling techniques.
4. 24 man-months maintenance and operations.

5. 14 man-months miscellaneous.
6. Training course in Accountancy completed in-country.
7. Evaluation Report re maintenance and operation by BVI.

Pure line seed storage unit at MARDS.

1. Completed storage unit.
2. Functioning input/delivery systems.

GOG has utilized Black and Veatch technical expertise and facilities at BBP, S & B, and the MRF operate properly.

1. GRB evaluation of BVI and other engineers services.
2. AID evaluation of borrower grantee professional services contract.
3. BVI services are continued through start-up and successful initial operation of MRF.
4. BBP and S & B facilities successfully tested and operating.

Special EOPS

A substantial cause of the delay and restructuring of this project has been the alleged failure of the contractor (Pemar) to meet its contractual obligations and the decision of the GRB to suspend their contractual relationship with the contractor. It is expected that the forthcoming arbitration proceedings will be completed by the time the loan completion report/final evaluation is scheduled.

Given the history of this project and the project elements that have been effected, it would be most difficult to finally evaluate the complete project unless the proceedings are completed. Thus the final evaluation, currently scheduled for mid-1977, may have to be postponed until such date as settlement is reached.

PART V - RECOMMENDATIONS

1. There have been some communication problems between the GRB, their Consultants, and USAID that could probably be avoided with a regularly scheduled monthly meeting. Two such meetings have been held as a result of the drafting and review of this paper and it is recommended that A.I.D. continue to coordinate such meetings in the future.
2. The Milled Rice Facility and possibly the Somerset & Berks storage/drying facility have fallen behind schedule. It is recommended that the GRB and their Consultants develop a Revised Implementation Plan for both facilities. In the event that the MRF is not substantially completed and tested by the Loan TDD of March 31, 1977, it will be necessary for the GRB to continue the services of BVI until such is accomplished. The GRB should agree to this stipulation in writing.
3. The GOG and USAID have agreed on a restructured training program to meet the immediate needs of the GRB. This includes training in August and September for eleven participants and management training for three senior officials in the Fall. It is recommended that in October following the completion of most currently scheduled training, the final needs of the GRB will be considered, with recommendations for any further technical assistance/training made at that time as necessary.
4. As shown in the section on financial status/disbursements, total disbursements are now approaching the amount available to be disbursed (but not including the \$420,000 to be set aside in DRA 504-L-00823). Since the Minister of Agriculture has indicated that he prefers not to open an L/C to secure the withheld \$420,000, it is recommended that the GOG consider alternative sources of funds as required to complete the project activities.

STATUS OF PARTICIPANT TRAINING UNDERTHE RICE MODERNIZATION LOAN 008

To date 34 Guyana Rice Board personnel have completed training under the Rice Modernization Loan 008 at a cost of US\$73,547.00. This represents approximately 40 man-months of training in various areas of rice production as follows:-

| <u>NAMES OF PARTICIPANTS</u> | <u>DATES OF TRAINING</u> | <u>COURSE</u> | <u>COST (US\$)</u> |
|------------------------------|--------------------------|---|--------------------|
| Morgan Allcock | 1/14/76 - 4/03/76 | Maintenance & Repair of Scales | 13,092 |
| Harold George | " " | " " | |
| Joel Pearson | " " | " " | |
| Sylvanus Mc. Kend | 9/26/75 - 10/23/75 | Rice Processing & Milling Techniques | 15,392 |
| David Dhanieram | " " | " " | |
| Drayton Bruce | " " | " " | |
| Ronald Johnson | " " | " " | |
| Horace Bamfield | " " | " " | |
| Ulric Katzy | " " | " " | |
| Sydney Jackman | " " | " " | |
| Leonard Parjohn | " " | " " | |
| Mahadeo Persaud | 9/26/75 - 10/23/75 | Rice Processing & Milling Techniques | 19,240 |
| Donald Pereira | " " | " " | |
| Samuel Persaud | " " | " " | |
| Hector Ouseley | " " | " " | |
| Bertie Mingo | " " | " " | |
| Hubert Small | " " | " " | |
| Joseph Burke | " " | " " | |
| Tribhawan Persaud | " " | " " | |
| Eugene Fypher | " " | " " | |
| Lionel Timmers | " " | " " | |

| <u>NAMES OF PARTICIPANTS</u> | <u>DATES OF TRAINING</u> | <u>COURSE</u> | <u>COST (US\$)</u> |
|---|-----------------------------------|--|--------------------|
| Murli Singh | 9/11/75 - 10/03/75 | Rice Production | 3,295 |
| Eustace Brooks | 7/25/75 - 8/27/75 | Marketing of Rice | 7,504 |
| Gulam Hussain | " " | " " | |
| Stanley Yearwood | " " | " " | |
| Noor Khan | " " | " " | |
| Francis Farnum | 1/14/76 - 1/31/76 | Rice Packaging | 3,836 |
| Eustace James | " " | " " | |
| Ramkissoon Jaipaul | 1/14/76 - 1/31/76 | Rice Packaging | 5,754 |
| Christopher Macey | " " | " " | |
| Michael Rowe | " " | " " | |
| Frederick Lashley | 9/25/75 - 10/24/75 | Executive Development | 1,758 |
| Leon Dundas | " " | " " | |
| Ignatius De Souza | 7/06/75 - 10/17/75 | Executive Program in Accountancy | 1,918 |
| Training currently scheduled for the remainder of the project is as follows:- | | | |
| Maurice Butler | 5/13/76 - 6/11/76 | Executive Development (Auditing) | 2,101 |
| Joshua Ching | 5/09/76 - 6/12/76 | Executive Development (Credit & Field Services) | 1,872 |
| Alfred Ramrattan | 5/30/76 - 7/24/76 | Executive Development Program (Public Admin.) | 3,066 |
| Neville Gittens | " " | Executive Development Program (Personnel and Industrial Relations) | 3,054 |
| John Baptiste | Mid-August, 1976 to Mid-September | Shipping & Traffic Techniques | 5,740 |
| Kunauth Maraj | " " | " " | |
| Eric Tucker | " " | " " | |
| Lingama Naidu | Mid-August, 1976 to Mid-September | Rice Research | 1,935 |
| Randolph Mercurius | " " | " " | 1,910 |

| <u>NAMES OF PARTICIPANTS</u> | <u>DATES OF TRAINING</u> | <u>COURSE</u> | <u>COST (US\$)</u> |
|------------------------------|--------------------------------------|--|--------------------|
| Vernon De Variel | Mid-August, 1976 to Mid-September | Installation & Maintenance | 5,810 |
| Ulric Bishop | " " | " " | |
| Ganga Persaud | " " | " " | |
| Leyton Simon | " " | Management & Maintenance | 3,900 |
| Ronald Profitt | " " | " " | |
| Pooran Dyal | " " | Field Trials, Demonstrations and Extension Activities | 1,880 |
| Ramlakhan | October-November 1976 | Rice Production Techniques | 1,880 |
| Percy Williams | " " | Rice Facilities | 1,924 |
| Neville Sutherland | 8/15/76 - 9/25/76 | Business Administration | 3,008 |
| Nomdeo Saywack | 10/02/76 - 10/28/76 | " " | |

PERFORMANCE EVALUATION-BORROWER/GRANTEE PROFESSIONAL SERVICES CONSULTANT

I. CONTRACT DATA

1. CONSULTANT'S NAME AND ADDRESS.

BLACK & VEATCH INTERNATIONAL
5454 110 St., Overland Park
Kansas City, Missouri 64114

2. PROJECT

-LOCATION: Guyana, South America

-TITLE: Rice Modernization - Rice Receiving, Drying and Storage Project
and Rice Research Station

LOAN/GRANT NO.: Loan 504-L-008: (Amendments,

Nos. 7 and 8)

| | | | | | | | |
|--------------------|--|--|---------------------|---|--------------------------|---------------------------------|---|
| 3. TYPE OF SERVICE | <input checked="" type="checkbox"/> DESIGN | <input checked="" type="checkbox"/> CONSTRUCTION SUPERVISION | 4. TYPE OF CONTRACT | <input type="checkbox"/> FIXED PRICE | 5. COMPLEXITY OF SERVICE | 6. PERIOD COVERED BY EVALUATION | |
| | <input type="checkbox"/> PLANNING | <input type="checkbox"/> OTHER (Describe) | | <input checked="" type="checkbox"/> COST PLUS FIXED PRICE | | | <input checked="" type="checkbox"/> DIFFICULT |
| | <input type="checkbox"/> RECONNAISSANCE | | | <input type="checkbox"/> OTHER (Describe) | | | <input type="checkbox"/> NORMAL |
| | | | | | | FROM: 10/1/74 | |
| | | | | | | TO: 5/31/76 | |

7. DESCRIPTION OF PROJECT:

The principal objectives of Amendment No. 7 to the Contract assigned all remaining contract commitments from Weitz Co., Inc., to BVI to provide engineering services for the inspection and supervision and run-in tests of the Rice Receiving, Drying and

[See Continuation Sheet]

| | | | |
|---|---|--|---|
| 8. AMOUNT OF ORIGINAL CONTRACT U.S.\$ 552,544.00 LOCAL CURRENCY EQUIVALENCY 123,790.00 | 9. TOTAL AMOUNT OF AMENDED CONTRACT U.S.\$ 88,444.00 LOCAL CURRENCY EQUIVALENCY | 10. DATE CONTRACT SIGNED Oct. 1, 1974 | 11. SERVICE COMPLETION DATES ORIGINAL SCHEDULE February 28, 1977 AS AMENDED FINAL OR ACTUAL |
|---|---|--|---|

12. LIST AND DESCRIBE TYPE AND EXTENT OF SUBCONTRACTING, USE OF JOINT VENTURES, OR USE OF INDIVIDUAL ASSOCIATE CONSULTANTS OTHER THAN IN-HOUSE STAFF.

The Associate Engineer, Watson International, Inc., provides mechanical and structural design, preparation of working drawings and specifications for the Milled Rice Storage Facility which is presently under construction in Georgetown; assistance to the Guyana Rice Board (GRB) in contractor prequalification on the Rice Research Station and Milled Rice Facilities.

II. PERFORMANCE

| RATING FACTOR (X) | YES | | NO | | RATING FACTOR (X) | YES | | NO | |
|--|-----|----|-----|----|---|-----|----|----|---|
| | YES | NO | YES | NO | | YES | NO | | |
| 1. DID OVERALL TECHNICAL PERFORMANCE BY CONSULTANT SATISFY PROJECT REQUIREMENTS AS SET FORTH IN SCOPE OF WORK? | X | | | | 7. WAS CONSULTANT'S PROJECT MANAGER: | | | | |
| | | | | | (a) QUALIFIED? | | X | | |
| 2. DID CONSULTANT'S FINANCIAL RESOURCES APPEAR ADEQUATE FOR PERFORMANCE OF CONTRACT? | X | | | | (b) EFFECTIVE IN WORKING WITH B/G AND OTHER OVERSEAS PERSONNEL? | | X | | |
| 3. WAS CONSULTANT'S TOP MANAGEMENT RESPONSIVE AND EFFECTIVE IN PROVIDING SOLUTIONS TO: | X | | | | (c) EFFECTIVE IN HIS PERFORMANCE? | | X | | |
| (a) TECHNICAL PROBLEMS? | | | | | 8. WAS THE CONSULTANT'S PERFORMANCE FACILITATED BY B/G PERSONNEL RESPONSIVENESS AND COOPERATION? | | | | X |
| (b) MANAGERIAL PROBLEMS? | | | X | | 9. WAS THE CONSULTANT'S PERFORMANCE FACILITATED BY A.I.D. PERSONNEL RESPONSIVENESS AND COOPERATION? | | X | | |
| 4. WAS CONSULTANT ABLE TO EFFECTIVELY COPE WITH OVERSEAS LOGISTICS? | X | | | | 10. WAS CONSULTANT'S LOCAL ASSOCIATE RESPONSIVE AND EFFECTIVE TO THE NEEDS OF THE PROJECT? | | | | |
| 5. DID CONSULTANT SUPPLY A TEAM OF THE REQUIRED CALIBER AS TO NUMBER, BLEND, AND QUALITY OF PERSONNEL? | X | | | | | | | | |
| 6. DID CONSULTANT'S PROJECT MANAGER AND OTHER OVERSEAS STAFF ADAPT TO ON-SITE CONDITIONS? | X | | | | | | | | |

III. OVERALL PERFORMANCE RATING: OUTSTANDING SATISFACTORY UNSATISFACTORY

(Continue on reverse)

IV. EXPLANATION OF RATINGS

1. EXPLANATION OF OVERALL PERFORMANCE RATING. (Give specific reasons for overall rating assigned.)

The Consultant assigned qualified engineers and technicians and has continued to demonstrate a good understanding of their objectives. Home office backstopping and their associate engineering firm's support has been good. The Consultant's staff meets almost daily with GRB officials and is readily available to the GRB and USAID. The performance has been good in most items, fair in others and outstanding in some. Although the Consultant has not always demonstrated initiative in getting involved in the day-to-day issues and problems of their counterparts in the Rice Board, the overall performance has been satisfactory considering the complexity of management

[See Continuation Sheet]

2. DISCUSSION OF RATINGS ASSIGNED TO SPECIFIC FACTORS. (Explain here any qualifying condition that affected the ratings assigned to the specific numbered factors of the Consultant's performance.) (Begin each explanation with number of rating factor to be discussed.)

II 3(b) As stated above, the Consultant tends to wait until the Rice Board involves the Consultant before initiating action on critical management issues, and has permitted the GRB to deviate from specifications in at least two known instances, without bringing this to USAID's attention or making it a matter of official record.

II 7(c) Consultant's Project Manager is generally effective but his reports are very cryptic and non-informative in nature. That is; they are usually not in sufficient detail and quality to permit action without further research.

II. 9 The Consultant had some justifiable complaints about the delay in obtaining A.I.D. approval on past procurement actions. Otherwise, relationships have been good.

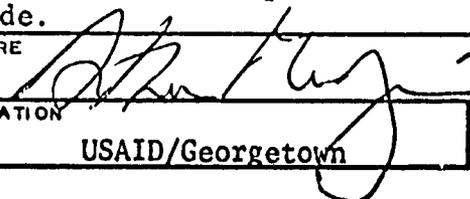
The above weaknesses have been discussed with the Consultant's staff and some improvement noted in recent months.

| | | | |
|--------------------|------------------------------------|---|-----------------|
| V. RATED BY. | TYPED NAME George D. Reasonover | SIGNATURE  | |
| | TITLE (Typed) Chief Engineer | ORGANIZATION USAID/Georgetown | DATE 7/14/76 |

VI. RATING REVIEW

1. RATING REVIEWER'S COMMENTS

I consider the above generally favorable rating to accurately describe the contractor's performance to the best of my knowledge. As advisors to a principal doing work on force account, the consultant does not have the leverage ordinarily available to enforce compliance with specifications. Exceptionally close coordination between principal, consultant and A.I.D. is therefore required. While there is still room for improvement in this respect, I am satisfied that all parties are aware of the need and that substantial progress has been made.

| | | | |
|---------------------------------------|-------------------------------|---|-----------------|
| VII. RATING RE- VIEWED BY | TYPED NAME Arthur W. Mudge | SIGNATURE  | |
| | TITLE (Typed) Director | ORGANIZATION USAID/Georgetown | DATE 7/14/76 |

VIII. ADDITIONAL COMMENTS (Indicate author of comments)

PERFORMANCE EVALUATION - BORROWER/GRANTEE
PROFESSIONAL SERVICES CONSULTANT

Continuation Sheet

Section I - Contract Data (Contd)

7. Storage Centers at Anna Regina, Wakenaam, Ruimzicht, MARDS, Black Bush Polder and Somerset-Berks. Amendment No. 8 provided additional funds [US \$88,444.00] for enlarging the scope of BVI's home office work and for architectural design work on the Georgetown Milled Rice Facilities by the Engineer's Associate firm.

Section IV - Explanation of Ratings (Contd)

1. problems inherited by the Consultant and the tendency on the part of the Government of Guyana and the Rice Board in particular to be uncommunicative with respect to GRB systems and procedures, procurement actions, etc. The Consultant has complied with all of the contractual terms. This evaluation reflects the Project Manager's observations for the past five months as well as an analysis of the Consultant's reports.

USAID RECOMMENDATIONS AND ACTION ON
BVI/WATSON AUDIT

TO: THE FILES
THRU: Mr. Arthur W. Mudge, Director
FROM: C. Gregory Smith, Capital Resources Development Officer
SUBJECT: Audit Report No. 76-362 dated June 4, 1976 by
AAG, AID/W on Black and Veatch International

I. BACKGROUND

The subject audit was received in mid-June by USAID, and contained three recommendations for USAID action.

The recommendations were as follows:

"RECOMMENDATION No. 1

USAID assure that the Guyana Rice Board issues an amendment to eliminate the 25% surcharge for employee benefits and amounting to \$42,388. The result of the adjustment will be to reduce the contract budget from \$640,988 to \$598,600

"RECOMMENDATION No. 2

USAID assure that consideration is given to the relevant material on the BVI bonus payments and that appropriate action is taken to resolve this matter

"RECOMMENDATION No. 3

USAID assure that appropriate action is taken to settle the \$14,428 considered ineligible for reimbursement."

II. ANALYSIS AND PROPOSED COURSES OF ACTION

A. RECOMMENDATION No. 1

ANALYSIS - Recommendation No. 1 is easy to comply with, and in fact is the result of a request by USAID that the 25% surcharge to direct salaries be looked at by the Auditors. This 25% surcharge had never been applied although funds to pay it were incorporated into Appendix K of the Amendment. BVI has acknowledged that this inclusion was an estimating error, and should have no objections to a contract amendment lowering the amount of the contract by \$42,388.00 to \$598,600.

PROPOSED COURSE OF ACTION - USAID, in a letter to the GRB concerning the audit findings, should explain the source of this error and suggest that the GRB and BVI amend the contract to account for the error.

Approved: (Sgd) Arthur W. Mudge
Director

B. RECOMMENDATION No. 2

ANALYSIS - Recommendation No. 2 is more difficult to deal with as evidenced by the fact that the Auditors were unable to reach agreement with BVI or the parent company, Black and Veatch, on the matter of bonuses. In essence, the dispute revolves around whether bonuses are an operating expense or a distribution of profits or both, and whether (and to what extent) bonuses should be included in calculating contractor's overhead.

The AAG/W Auditors state that they accept the results of the Contractor's Auditors, Peat, Marwick and Mitchell (PMM) with the exception of bonus payments. The AAG/W audit then presents adjusted not overhead rates calculated with all bonus payments excluded (the adjusted overhead rates are 79.1% for 1974 and 84.5% for 1975, as opposed to the PMM rates of 85.482% for 1974 and 91.86% for 1975). The overhead rate adjusted for 1974, 1975 and 1976 is \$1,453.00 less than the total paid to BVI for overhead during that period.

Although no agreement was reached with BVI or Black & Veatch, the AAG/W audit did note that an earlier DCAA audit had accepted two-thirds of the bonuses paid by Black & Veatch as legitimate operating expenses. The AAG/W Auditors recommended that this same adjustment be applied in this case - a recommendation that was rejected by the Black and Veatch Controller. If such adjustment were accepted by BVI, the GRB would be eligible for a credit adjustment of approximately \$500.00 for the 1974-1975 two-year period.

PROPOSED COURSE OF ACTION - A.I.D., in its letter to the GRB explaining the results of the AAG/W audit, should point out that bonus payments as a partial determinant of overhead rates have been questioned, should point out the amounts involved, and should recommend to the GRB that they suggest to BVI that they follow the same formula earlier proposed by the DCAA and accepted by Black and Veatch. (NOTE: The savings, if this is accepted by BVI, would be roughly \$500.00 for the 1974-1975 period. Conversely, the loss to the GRB will be minimal if Black & Veatch does not accept the suggestion of the GRB).

Approved: (SGD) Arthur W. Mudge
Director

C. RECOMMENDATION No. 3

ANALYSIS - Recommendation No. 3 is concerned with a total of \$14,428 that was reimbursed to the sub-contractor (Watson Engineering) that the AAG/W Auditors feel was not allowable. Reimbursement of this amount was for overhead which included items such as bad debts (1975) that should not have been included in calculating overhead rates. Total overhead paid in 1974-1975 was \$39,774, while overhead accepted totals \$25,346. Thus a total of \$14,428 has been charged to the GRB that should not have been charged. The audit states that the sub-contractor has agreed with the total overhead accepted in the audit.

PROPOSED COURSE OF ACTION - USAID, in its letter to the GRB should recommend that the GRB ask BVI to agree that Watson Engineering has received \$14,428 above the amount they were entitled to under the contract, and to adjust their next invoice(s) to reflect a credit of that amount against the expenses included in the invoice.

Approved: (SGD) Arthur W. Mudge

SUMMARY - Upon internal approval of the Proposed Courses of Action, a letter will be drafted to the GRB informing them of the results of the Audit and suggesting that the GRB may wish to act according to our recommendations. A copy of this letter will also be forwarded to AAG/W to satisfy their request for action.

United States of America
AGENCY FOR INTERNATIONAL DEVELOPMENT
Mission to Guyana

July 19, 1976

Mr. Neville Sutherland
General Manager
Guyana Rice Board
1 & 2 Water Street
Georgetown

Dear Neville:

SUBJECT: AID Loan 504-L-008
Rice Modernization

In the course of our review of Contract Amendment No. 8 between the Guyana Rice Board and Black and Veatch International, several provisions of the contract seemed to us to merit further consideration, and in April we requested that our Washington Audit Office perform an audit of the GRB/BVI contract.

This audit was completed in May, and a copy of the Audit Report forwarded to us in June.

There are three recommendations in the Audit, and in each case we are suggesting a course of action which the Guyana Rice Board might wish to pursue. The recommendations, and our suggestions are as follows:

"RECOMMENDATION No. 1

USAID assure that the Guyana Rice Board issues an amendment to eliminate the 25% surcharge for employee benefits amounting to \$42,388. The results of the adjustment will reduce the contract budget from \$640,988 to \$598,600."

The 25% surcharge referred to in this section was an estimating error, although it was included in Annex K of the Amendment and is included in the total cost of the contract. BVI is apparently in agreement that this sum (\$42,388.00) should be deducted from the amount of the contract, thus resulting in a new contract amount of \$598,600.00.

We accordingly suggest that you amend the contract by letter exchange, reducing the U.S. Dollar amount to \$598,600.00.

"RECOMMENDATION No. 2

USAID assure that consideration is given to the relevant material on the BVI bonus payments and that appropriate action is taken to resolve this matter."

The Auditors were unable to reach agreement with BVI on this issue of whether bonuses (or to what extent bonuses) should be considered as operating expenses and thus as a determinant of overhead rates. The amount that might be reimbursed to the Government of Guyana if the formula proposed by the Auditors were accepted would be US \$500.00 for the 1974-1975 period. Even though the amount is quite small, we suggest that you request that BVI adopt the formula proposed by the Auditors (and earlier accepted for the parent company, Black and Veatch, as the result of a DCAA audit), whereby two-thirds of the bonuses paid are accepted as operating expenses and are accordingly acceptable as components in calculating overhead rates. You should also request a credit adjustment on BVI's next invoice.

"RECOMMENDATION No. 3

USAID assure that appropriate action is taken to settle the \$14,428 considered ineligible for reimbursement."

Watson International has been reimbursed \$14,428.00 for overhead which was calculated using items that are not acceptable as components in figuring overhead rates. Watson has acknowledged this fact, and apparently is willing to make a credit adjustment on invoices to be submitted by Watson for work performed.

We accordingly suggest that you ask BVI to agree that Watson Engineering has received \$14,428,000 above the amount they were entitled to under the contract, and for BVI to adjust their next invoice (s) to reflect a credit of that amount against the expenses included in the invoice(s).

Sincerely yours,
(Sgd) Arthur W. Mudge
Director

LIST OF PROCUREMENT
ITEMS YET TO BE PURCHASED

| <u>CONTROL NUMBER</u> | <u>DESCRIPTION</u> | <u>AMOUNT</u> |
|-----------------------|--|---------------|
| E - 13 | Temperature Detection & Monitoring | 6,279.27 |
| | Dryer Ducts | 26,100.00 |
| M - 12 | Aeration Duct System | 6,885.30 |
| M - 10 | Aeration System | 10,976.08 |
| E - 23 | Electrical Supplies for Intercom. System | -0- |
| E - 22 | Communications Equipment | -0- |
| E - 11 | Electrical Materials | 2,706.25 |
| PP - 11 | Truck Scale and Dumper | 34,700.00 |
| PP - 41 | Main Control Panel | 26,580.00 |
| | Distributor Assemblies | 6,838.00 |
| | Motor Control Center | 4,769.00 |
| | Two 3/4 Ton Pick-ups; three Scout Jeeps | 28,845.00 |
| | Spouting, Gates and Valves | 132,469.00 |
| | Electric Sign | 37,000.00 |
| | Vacuum Cleaners | 4,819.25 |
| PP - 23 | Sewage Pumps | 958.00 |
| E - 26 | Fuel Systems (six) | 13,500.00 |
| E - 26 | Fire Control Units (four) | 3,200.00 |
| PP - 35 | Gravimetric Feeders (ten) | 16,750.00 |
| PP - 49 | Lighting Protection Equipment | 12,635.20 |
| PP - 48 | Ullrich Planfile Unit | 1,900.32 |
| | Dryer Duct Modifiers (six) | 40,057.20 |
| PP - 30 | Siding, roofing, metal doors etc. | 90,000.00 |
| PP - 47 | Standby Generators | 42,570.00 |
| PP - 38 | Miscellaneous Electrical Items | 62,700.00 |
| | Cement | 9,000.00 |
| | Reel Scalpers (six) | 41,488.00 |
| | Rack & Pinion Valves | 15,946.00 |
| | Temperature Detection System | 10,228.19 |
| | Tote Crane | 60,660.00 |

IMPLEMENTATION LETTERS ISSUED UNDER
LOAN 504-L-008

| <u>Implementation Letter No.</u> | <u>Date</u> | <u>Purpose</u> |
|--------------------------------------|-------------|--|
| 1 | 3/11/69 | Approval contract with Nance Engineering |
| 2 | 4/25/69 | All the things normally contained in Imp. Ltr. No. 1, including C.P's, procurement, disbursements, covenants, reports. |
| 3 | 5/05/69 | Extended TDD to 7/31/72; TCD to 1/31/72 |
| 4 | 8/07/69 | Advised of new A.I.D. Late Bid Procedures |
| 5 | 8/19/69 | Extended TD for C.P's from 9/10/69 to 9/30/69 |
| 6 | 9/25/69 | Advised that only 3.01(b)(3) remained as C.P. to Initial Disbursement |
| 7 | 9/27/69 | Extended TD for C.P's from 9/30/69 to 10/31/69 |
| 8 | 10/22/69 | Advised that all C.P's to Initial Disbursement, allowed for reimbursement to GOG the money spent for Nance Engineering Contract. |
| 9 | 11/17/69 | Transmitted Capital Projects Guidelines |
| 10 | 12/02/69 | Extended TD for C.P's from 12/10/69 to 12/17/69 |
| 11 | 12/17/69 | Extended TD for C.P.s from 12/17/69 to 1/17/70 |

| <u>Implementation Letter No.</u> | <u>Date</u> | <u>Purpose</u> |
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| 12 | 1/04/70 | Extended TD for meeting C.P.s from 1/17/70 - 3/10/70, and to 10/31/70 the C.P. for the Rice Research Station. |
| 13 | 2/02/70 | Extended TCD from 1/31/72 to 12/31/72 and TDD from 7/31/72 to 7/31/73. These extensions were necessary because the Stage I Contract had a 900 day completion period. |
| 14 | 3/09/70 | Extended TD for meeting C.P.s (3.02 and 3.03) from March 10, 1970 to April 10, 1970, since contracts for cement mortar pile and other contracts were about to be signed. |
| 15 | 4/15/70 | Modified Sec. 3.02 of C.P.s to permit insurance of L/Comms for equipment and construction cost control to be submitted by June 1, 1970; and 3.02 (d) O & M Plan by May 15, 1970. |
| 16 | 7/08/70 | Modified Annex I to Loan Agreement, deleting Lot 66 and Leguan sites, and substituting therefor Somerset-Berks and Black Bush Polder. Also added the word 'approximately' 50 mobile units for paddy and milled rice bulk handling and transport. |
| 17 | 2/18/71 | Explains how to utilize loan proceeds per Amendment to Loan Agreement. The I/L explains untying, and other applicable sections of the Loan Agreement. |
| 18 | 7/08/71 | Established cost reimbursement mechanism for all non-major items. |

| <u>Implementation Letter No.</u> | <u>Date</u> | <u>Purpose</u> |
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| 19 | 7/09/71 | Modifies Annex I to Loan Agreement, milled rice facility moved to Georgetown, deleted requirement for bagging at all six centers. Require the GRB to submit to A.I.D. documents proving that GRB has title or unobstructed access to MRF land. |
| 20 | 1/19/72 | Extended TD for compliance with C.P.s under Sec. 3.03 of Loan Agreement from 4/10/70 to 12/31/72. |
| 21 | 12/7/72 | Extended TCD to 12/31/73 and TDD to 7/31/74. |
| 22 | 12/7/72 | Extended TD for meeting C.P. to Disbursement for Technical Assistance to 12/31/73 |
| 23 | 7/05/73 | Designated all items for the Rice Research Station as "non-major" for purposes of procurement. |
| 24 | 7/12/73 | Updates Code 941 countries and supersedes list from Imp. Ltr. No. 17. |
| 25 | 12/3/73 | Extends TDD to June 30, 1975 and TCD to December 31, 1974. |
| 26 | 3/01/74 | Eliminates 50/50 Shipping (6.08 of Amended Loan Agreement), permits Code 935 use. |
| 27 | 10/1/74 | Extends to 3/31/77 the Loan TDD. |
| 28 | 2/03/75 | Extends TCD until 12/31/75 |
| 29 | 2/03/75 | Extends to 6/30/75, the period allowed under Section 3.04 for contracting technical assistance. |
| 30 | 11/11/75 | Changes source and origin for shipping to Code 935. |