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DUPLICATE

ANNUAL REVIEW AND EVALUATION

USAID/Perú
April, 1976
A.I.D. Loan No.527-L-028
Tarapoto-Rio Nieva Road
Period Covered: January 1975 - March 1976

I. BASIC DATA

1.	Borrower	:	Government of Perú (GOP)
2.	Executing Agency	:	Ministry of Transportation and Communications (MTC)
3.	Monitoring Responsibility	:	USAID/Perú/Engineering
4.	Construction of road	:	MTC's Construction Division by Force Account
5.	Loan Amount	:	$12,100,000
6.	Date Authorized	:	March 3, 1964
7.	Date of Loan Agreement	:	May 19, 1964
	Amendment No. 1	:	January 10, 1975
8.	Monitoring Plan Approved	:	January 21, 1975
	Amendment No. 1	:	September 24, 1975
	Addendum to provide Army construction unit at Venceremos	:	January 14, 1976
9.	Terminal Commitment Date	:	September 30, 1977
10.	Terminal Disbursement Date	:	December 31, 1977

II. BRIEF PROJECT DESCRIPTION

Construction of 238 Kms. of a Peruvian Class II highway between Tarapoto and Rio Nieva.

From the date of authorization (March 3, 1964) through 1968 a total of $2,610,000 from A.I.D. Loan funds were expended by the then construction

contractor, Morrison Knudsen (EMKAY), and the engineering firm, Brown & Root. Due to project-related problems and the uncertain political environment created by the change of Government in October 1968, all loan disbursements were stopped in early 1969. From then through 1974 the GOP, through the Ministry of Transportation and Communications, (MTC) continued construction work on a small budget. The amount of work accomplished during this period was limited, but of satisfactory quality. The Loan was reactivated in late 1974 and the authorizing amendment was signed January 10, 1975. The MTC is now building the road by force account with A.I.D. Loan-financing. The $9,490,000 remaining under the Loan as of amendment signature are budgeted as follows:

$8,110,000 - direct construction costs;
1,110,000 - procurement of spare parts;
270,000 - monitoring

The Office of Engineering of USAID/Perú is responsible for monitoring the project. The monitoring staff contracted by the Mission to assist it in this regard is composed of two civil engineers, one controller of work, one accountant and one secretary.

III. PROJECT ADMINISTRATION

A. Compliance with Conditions and Covenants:

Borrower has complied with all conditions and covenants set forth in the Loan Agreement as amended.

B. Implementation Letters Issued

1. Implementation Letter No.15, issued December 31, 1974, extended the terminal dates for disbursements from November 30, 1974 to January 31, 1975. (By Amendment No.1 to Loan Agreement the TCD and TDD were reestablished to September 30, 1977 and December 31, 1977 respectively.)

2. Implementation Letter No.16, issued January 20, 1975, acknowledged compliance with the Conditions Precedent contained in Amendment No.1 to the Loan Agreement and specified the disbursement procedures to be utilized.

3. Implementation Letter No.17, issued June 17, 1975, clarified A.I.D. regulations regarding Loan-financed motor vehicle procurement and commodity source and origin.

C. Disbursement Progress:

1. Initial Disbursement: By Implementation Letter No.16, a Revolving Fund of S/.40,000,000 ($922,084.00)1/ was established early in 1975 for financing local currency costs.

2. Latest Disbursement: February 26, 1976, in the amount of S/.7,200,146.11 ($160,003.00)2/, for MTC expenditures from December 21, 1975 to January 20, 1976.

3. Disbursements to Date:

Allocated following Loan Reactivation	$9,490,000
Disbursements (In Dollars)3/	
- Establishment of Revolving Fund	$ 922,084
- Vouchers Nos. 1 thru 12 (as of 2/76) as reimbursement to replenish Revolving Fund	2,102,053
- Monitoring Office as of 2/76	33,472
Total Disbursed:	$3,057,609
Remaining Balance:	$6,432,391

IV. PROJECT EVALUATION

In 1964 when this project was developed the requirements for stating goal, purpose, outputs, etc. with a view towards formal evaluation were less specific than current requirements. As a result, what was written at the time as regards goal, purpose, etc. was somewhat vague in terms of evaluating the project according to today's standards. Nevertheless, in undertaking this evaluation the Mission has tried to reconstruct the project design and to employ as much of the logical framework evaluation criteria as possible. Accordingly, in Part IV, C of this evaluation a specific, measurable project goal and purpose are set forth as they are perceived at the

1/ At exchange rate of S/.43.38 per US$1.00

2/ At exchange rate of S/.45.00 per US$1.00

3/ At the official exchange rate in force on the date disbursements were made: S/.43.38 per U.S.$1.00 through 9/26/76, and S/.45.00 per U.S.$1.00 thereafter.

present time. Project inputs and outputs are evaluated (Parts IV A and B respectively) against a performance rating checklist similar to that employed in the PAR for grant projects.

A. Inputs.

1. A.I.D. Loan Funds: originally $12,100,00 of which $2,610,000 were used prior to suspension of Loan disbursements in 1969; the balance of $9,490,000 was allocated in the CAP supplement for construction (qualifying material, spare parts and equipment) and engineering expenses, distributed as described in Part II (Brief Project Description, Page 2).

2. EXIM Loan Funds: $16,661,000 of which $13,661,000 were used prior to suspension of disbursements; the balance of $3,000,000 was subsequently reactivated for financing the procurement of U.S. equipment, materials and services.

3. GOP Counterpart Contribution: In 1964, the GOP contribution was originally estimated at the equivalent of approximately $12 million, or roughly equal to the A.I.D. Loan; as a result of their assuming all construction starting in 1969, the GOP had contributed the equivalent of $14,791,000 by October 15, 1974.

In reactivating the A.I.D. Loan in late 1974, the GOP committed itself to provide budget resources needed in addition to Loan funds to complete the road; in the CAP supplement, this GOP counterpart was allocated to construction activities (including salaries and operating expenses) and minor equipment and spare parts procurement, and was expected to be approximately $2,000,000.

As of April 1976, the GOP has provided S/.10 million ($222,000) in budgetary resources to cover expenses not eligible for Loan financing and approximately $111,000 worth of minor equipment and spare parts from MTC's mechanical services division. In addition, the GOP is planning to finance in the project area two 80-meter special steel bridges, valued at S/.30 million ($667,000), to be designed and constructed as part of an MTC contract with SIMA (Servicio Industrial de la Marina). Based on these figures, the total value of GOP resources provided or committed to the project to date is $1,000,000. To this total must be added the costs of the MTC's maintenance of the finished portion of the road, the figures for which are not currently available. Supplemental support to construction is being provided by the Army Construction Battalion, which will construct a section of the road beginning from Venceremos until it joins with the MTC work forces.

Nevertheless, to complete this project in a satisfactory manner USAID now estimates that the total contribution required of the GOP will be at least $3 million, approximately $1 million more than anticipated at the time of loan reactivation. The USAID has advised the Minister of Transportation and Communications of the need to budget for this necessary funding in their upcoming 1977-78 biennial program.

4. Performance:

INPUTS

	Unsatisf.	Satisf.	Excell.
(a) efficiency of disbursements of loan funds		X(-)1/	
(b) efficiency of procurement of goods and services	X2/		
(c) GOP compliance with budgetary and staffing obligations		X(-)3/	
(d) AID/W backstopping support		X(-)4/	
(e) Training; Performance of consultant			X5/
(f) Local labor		X(+)6/	

1/ The estimated disbursements expected for CY 1975 were $2,800,000. Actual expenditures, in fact, amounted to $2,180,784 or 77.9% of the estimate. While actual expenditure performance can be considered relatively satisfactory, it nevertheless fell short of the target estimate. The shortfall can be attributed in part to problems with equipment and spare parts, and compounded by less than satisfactory GOP project management and engineering during the first nine months of 1975.

2/ See Section IV.D for comment on procurement efficiency.

3/ Early in 1975 the USAID field contract monitor called attention to field problems resulting from poor project management from the MTC Chief of Project and insufficient engineering personnel on the job. Not until June 20 did the MTC make the decision to change the Chief of Project and to advertise for 3 second-level engineers. It was September before the new Chief of Project and 3 new engineers joined the staff.

4/ While AID/W has generally been quite helpful, some delays have been experienced such as authorization to have a Peruvian Army Construction Company work on the Venceremos Front of the Project.

Also in early April 1975, at MTC's request through USAID, AID/W agreed to send a heavy equipment specialist to Perú to assist in defining more precisely the project's spare parts and new equipment needs. It took 3 months and the naming of 3 nominees before Mr. Owen Beckner finally arrived in Lima late in June 1975.

5/ There is no scheduled training provided for under the project. However, it is appropriate to note that both EMKAY and Brown & Root trained many mechanics, equipment operators, warehousemen, and engineering technicians who are still with the project and playing key roles.

As noted in 4/ above, Mr. Owen Beckner heavy equipment specialist, arrived Perú late in June and visited the project site. His advice on new equipment needs and spare parts quantities was well received by the MTC and his recommendations are being followed by the Mechanical Division of the Project.

6/ Local labor generally has performed well. Many laborers especially skilled workers, have been with the project since 1966.

To date there have been 3 minor strikes with total lost time being less than two weeks. Wages have been the basis for each of the strikes.

B. Outputs

1. Performance:

OUTPUTS	Unsatisf.	Satisf.	Excell.
(a) quality of implementing agency personnel and management practices		X(-)1/	
(b) utility of technical assistance to project			X2/
(c) quality and utility of studies		X(-)3/	
(d) construction progress		X(-)4/	
(e) technical soundness of construction			X(-)5/
(f) environmental impact of project		X	
(g) costs of project components	X(-)6/		
(h) adherence to project implementation schedule		X(-)7/	

1/ During the first three quarters of 1975 project leadership and engineering expertise were largely unsatisfactory. However, since September 1975, when a new MTC Project Manager was appointed, the performance of the implementing staff at the project site has improved considerably. Good leadership by the new MTC Chief of Project along with a new staff of second level engineers has been the most important factor in keeping the project moving along well in spite of old (and sometimes brokendown) equipment and spare parts shortages. These personnel changes, effected at USAID's urging, resulted in a distinct acceleration of the construction pace during the last quarter of 1975 and into 1976.

Unfortunately, overall project backstopping/support by the MTC Lima headquarters offices has been less than satisfactory. The Director of Construction has frequently vacillated in making decisions having a major bearing on construction progress. For example, after he had decided to

make use of a U.S. purchasing agent to expedite procurement of spare parts and new equipment, he then changed his mind and decided to procure through local representatives of U.S. suppliers. This change of mind cost the project some 8 or 9 months in getting necessary spare parts and new equipment.

The Director of Construction has been limited in his decision making by the fact that he frequently is unable to communicate with his superior, the Director General of Land Transport, on a timely basis,

2/ The loan has no Technical Assistance component as such. However, it should be noted that the USAID-contracted project monitor is contributing significantly in providing technical advice on geological problems, on blasting efficiency and utilizing fertilizer and fuel oil (ANFO) as the prime explosive, and on general project organization. The contractor has established a good working association with the new MTC Chief of Project.

3/ The MTC Division of Special Studies has carried out satisfactory investigations for bridge foundations at 3 sites where conditions presented potential problems for concrete abutments. Their recommendations are being followed.

Landslides continue to be serious hazards to the completed sections of this road. The MTC has not yet provided consultants to make the needed detailed geological slides studies. The USAID contract monitor made a preliminary evaluation of several slide areas recommending more detailed investigations. The MTC Division of Special Studies followed up by sending 2 of their geologists to the area, but they merely confirmed the USAID Monitor's conclusion, without further investigation/appraisal having been made. A.I.D. continues to push the MTC's for a comprehensive slides study.

4/ Construction progress is satisfactory, considering the dearth of equipment and spare parts and the remoteness of the current project construction site. Further improvement can be realized only when spares and new equipment arrive.

5/ Despite the problems with equipment and spares and the fact that construction by MTC force account does not permit least costly and fastest construction, the technical quality of construction is very good. Monthly reports by the USAID contract monitor, plus periodic inspections by USAID/Perú engineers, confirm this. Materials going into the road construction are controlled by engineering testing that meet the specifications. Care is taken in blasting with well-controlled quantities of explosives so as not to aggravate future slide problems. Construction practices, adjusted to jungle conditions, are good and conform to the specifications and design standards.

6/ Costs per kilometer on this project are high when compared with normal road construction jobs. These are mainly attributed to the inaccessibility of the area. Originally, all heavy equipment and construction steel was brought to the area via the Amazon River and required scheduling up to two years in advance. Construction steel, cement, spare parts and lighter construction equipment currently needed must be flown in by cargo planes.

7/ In June, 1975, USAID requested MTC to prepare an updated implementation schedule. To date they have not done so, arguing that until new equipment (EXIM $3,000,000 credit) and meaningful quantities of spare parts (A.I.D. loan funds) come to the project it is not practical to project a schedule for completing the works. USAID will insist on such a scheduling once the equipment and spares arrive.

2. Work remaining to be done on the Tarapoto-Rio Nieva Highway:

Final survey of centerline and design of road (very recently completed); minor changes may still be made in the last 3 kilometers (2 miles)

Cleaning trees and brush from road construction area; approximately 7 kilometers (4 1/2 miles).

Blasting, excavating and making embankments for a trail road on centerline over which a service pick-up truck can readily travel; approximately 15 1/2 kilometers (10 miles)

Final shaping of roadbed to design dimensions; approximately 33 kilometers (20 miles).

Placing culverts and construction headwalls; 15 regular culverts with diameters varying between 36" and 66" plus 2 triple-multiplate culverts at 126".

Bridges; 7 remaining; one of 40 meters is 50% complete; one each of 50 meters and 100 meters are just getting started; 2 of 60 meters are not yet started. These 5 are expected to be completed by December 31, 1977. In addition, 2 special steel bridges (Rio Blanco and Rio Serranoyacu) will be constructed by SIMA (the Peruvian equivalent of the US Navy CB's). These two bridges will probably not be completed by the end of 1977, but the river crossings will have detours so that traffic will be able to pass until the bridges are opened.

Placing subbase; 70 kilometers (44 miles) remaining between Rioja and Río Nieva.

Placing base course/wearing course and final road improvement; 120 kilometers between Tarapoto and Rioja to be done if Loan funds permit.

C. Project Goal, Purpose and EOPS:

1. Goal - To develop the agricultural potential of the Mayo River Basin and from Tarapoto to Yurimaguas in large part by opening up new lands for colonization by surplus populations from elsewhere in Peru.

2. Purpose - To establish the first land route (for transportation of agricultural production, inputs, etc.) from the Mayo River Basin and from Yurimaguas to Tarapoto to the coast of Perú.

3. EOPS - Conditions which will exist when Purpose has been achieved:

Road communication between Peru's vast northerly jungle area from the Mayo River Basin and Yurimaguas to Tarapoto and the coast. Approximately 300,000 hectares of high jungle will be open to colonization and agricultural development, and producers will have access to much larger markets when the road is completed.

D. Evaluation of Impact and Achievement of Project:

The current Minister of Transportation and Communications has publicly asserted the high priority his Government attaches to this project. On a list* of 75 highest priority development investment projects in Peru, the Tarapoto-Río Nieva Highway project ranks No. 39 in order of priority and heads a list of 7 major road projects throughout the country.

Until the planned road is completed and open to traffic for a period of time, it will not be possible to assess the contribution of the project toward achievement of the Goal. However, it is worth noting that considerable spontaneous colonization has already taken place along road construction completed to date. With each advance of the road's construction more and more farm families are migrating into the area from other parts of Peru and new lands along the road are being cleared and opened up for farming. New communities are springing up.

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*Published by The Andean Report, February, 1976.

With respect to progress towards achievement of the project Purpose, despite weak project administration and delays in ordering equipment and spare parts, the construction of the road is proceeding satisfactorily and in accordance with the planned design standards. Some 15 1/2 kilometers (10 miles) of very difficult mountain jungle terrain remain before a construction trail will be open over which service vehicles and heavy construction equipment can readily pass. Nearly one million cubic meters of hard rock must be blasted; some of the rock cuts will be up to 40 meters deep. At the approaches to the Serranoyacu River several reinforced concrete retaining walls must be built to support the road on the canyon walls.

A change of the MTC Chief of the Project in September 1975 has made a major difference in construction accomplishment. The new Chief of Project is dynamic and works vigorously to get all available equipment onto his job. Though hampered by lack of spares and equipment, the construction pace is now good given what there is to work with. The arrival of new equipment and spares should accelerate project progress significantly.

The MTC office in Lima has been very slow in taking the administrative steps required for the ordering of spare parts and new equipment; however, they are about to place the necessary orders. If the spare parts and equipment arrive at the construction site as planned, in August and September 1976, and if the Army Construction Company, with equipment as promised, effectively joins in the remaining 15 1/2 kilometers of major road construction work, construction should reach a pace which could see all Loan funds disbursed by the December 31, 1977, TDD. However, an accurate appraisal of a realistic project completion date cannot be made until the spare parts and equipment arrive and begin operating at the work site. This appraisal will be made in late 1976.

In the meantime, the Mission will continue urging and helping MTC offices in Lima to procure and deliver to the project the spare parts and new equipment. The Mission will continue to remind the MTC that there will be no extension of the December 31, 1977, TDD and that the GOP should plan to include funds in its 1977/78 biennial budget to complete the Project. The USAID contract monitoring which has demonstrated its importance and effectiveness in keeping the construction work moving along at the project site will continue, while monitoring from USAID/Perú will intensify during the coming six months until the impact of the spares, and new equipment is clearly seen at the work site.