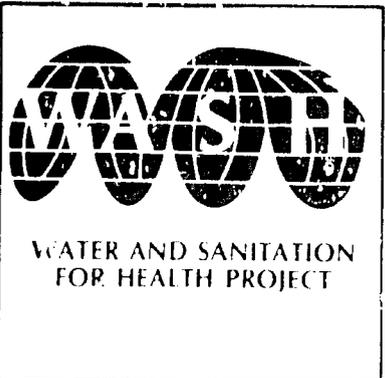


PN-AS-510

**AN ASSESSMENT OF THE METHOD
OF TRAINING PROMOTERS OF
THE ECUADORIAN INSTITUTE
OF SANITARY WORKS
AMBATO, ECUADOR
May 17 to June 4, 1982**



Operated by
CDM and Associates
Sponsored by the U.S. Agency
for International Development

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WASH FIELD REPORT NO. 49

SEPTEMBER 1982

The WASH Project is managed by Camp Dresser & McKee International Inc. Principal cooperating institutions and subcontractors are: Associates in Rural Development, Inc.; International Science and Technology Institute, Inc.; Research Triangle Institute; Training Resources Group; University of North Carolina at Chapel Hill; University Research Corporation.

Prepared For:
USAID Mission to the Republic of Ecuador
Order of Technical Direction No.96

PN-ABE-220
12/15/85

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Prepared for the USAID Mission to the Republic
of Ecuador under Order of Technical Direction No. 96

Prepared by:

Hortense Dicker

September 1982

Water and Sanitation for Health Project
Contract No. AID/DSPE-C-0080, Project No. 931-1176
Is sponsored by the Office of Health, Bureau for Science and Technology
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Washington, DC 20523

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Chapter 1

INTRODUCTION

1.1 Opening Remarks

From May 17 to June 4, 1978, a course on rural water supply systems was conducted for community promoters of the Ecuadorian Institute of Sanitary Works (Instituto Ecuatoriano de Obras Sanitarias--IEOS), in Ambato, Ecuador. This report is based on observation of the course from May 19 to 26, 1982. The services of the consultant to review the training course were provided through the Water and Sanitation for Health (WASH) Project as a result of a request by the Office of Health of the U.S. Agency for International Development under Order of Technical No. 96.

1.2 Purpose of the Assignment

The purpose of this assignment was to:

1. Observe, analyze, and, to the extent possible, evaluate the course in terms of methodology, the training staff performance, training materials, overall organization of the course, logistics, specific training activities, etc.
2. Prepare a report of the resulting observations and recommendations, and share the information with the USAID Mission in Ecuador, WASH, and the Office of Health of USAID in Washington, D.C.

It should be noted that the analysis and recommendations focused on the process rather than the content of the training, since the consultant engaged for this assignment did not have a technical background in water supply and sanitation and was not qualified to comment on the content of the course.

1.3 The Instituto Ecuatoriano de Obras Sanitarias (IEOS)

The IEOS is a public agency responsible for environmental sanitation in the urban and rural areas of Ecuador. Formed in 1965 under the jurisdiction of the Ministry of Public Health, it nonetheless has an autonomous administration. With planning and normative powers at the national level, its activities include the planning, design and execution of potable water and sewer systems. It is currently carrying out an AID-financed program to bring potable water to 46 rural communities under an integrated development program as part of the 1980-1984 National Development Plan. The Plan gives high priority to the previously neglected rural sector.

1.3.1 Rural Potable Water Program

The rural potable water program relies heavily on community participation for its success. While IEOS gives technical assistance in the design and supervision of the construction of the water system, as well as subsidizing a major portion of the cost of construction, the communities must contribute 20 percent of the cost of construction and supply manpower to dig trenches and to build the system under the direction of the IEOS engineer and the IEOS community promoter. Once built, the system is administered by the community itself under a local administrative council formed expressly for this purpose. The council is responsible for maintaining and repairing the potable water system, setting user rates, collecting user fees, and administering the finances of the system.

1.3.2 The IEOS Community Promoter

The requirement for community collaboration in the construction and administration of the rural potable water systems places considerable importance on the role of the community promoter. IEOS has a cadre of promoters working in rural communities. Their function has been to work with the communities, motivating them to participate in the water projects, helping them to organize the administrative councils, training them in their functions, and troubleshooting as problems arise in different phases of the process.

While the promoters are assigned by and work under the formal supervision of the Department of Promotion and Sanitary Education of IEOS, in practice they work under the IEOS engineers who supervise the construction of the water systems. Since the promoters are not for the most part professionals in the formal sense, they are considered to be quite low in the IEOS hierarchy, and the relationship between engineer and promoter often is frustrating for the promoter.¹

With the advent of the AID-funded rural potable water program, the role of the promoter has become even more important to the success of local projects. IEOS does not have enough engineers to give adequate attention to each community under the expanded program, and the promoters will have to take increased responsibility for the technical aspects of the construction and maintenance of the system. It is this new responsibility that gave rise to the training course in Ambato.

¹ The only apparent requirement for becoming a community promoter is the completion of secondary school, although some promoters have one or more years of post-secondary education.

Chapter 2

OBSERVATION OF TRAINING

2.1 Limitations of the Assignment

Certain limitations to the assignment should be noted. The observer's role in the training group was an ambiguous one. The IEOS training coordinators were told that the observer's presence at the course was to briefly observe the proceedings for AID/Washington. It is doubtful that the analysis and recommendation aspects of the assignment were known to them. Nor was the observer formally introduced to the trainees, though her presence was referred to by the training staff from time to time. The impression of lack of clarity as to the role was reinforced when one of the principal training coordinators asked if the observer wanted to participate at one of the sessions as a trainer.

The ambiguity of the observer's role was to a certain extent fostered by the USAID Mission in order to avoid giving the IEOS training staff the impression that they were being monitored. Some understandable concern was expressed on this issue. Under the circumstances the observer felt it necessary to tread carefully in conversations with the IEOS staff--making it difficult at times to communicate openly with them and to obtain information and materials needed to effectively complete the assignment. For example, a day-by-day outline of the course was not obtained despite several requests, nor was a participant list made available. Training staff meetings that may have taken place during the observation period did not involve the observer. Nonetheless, despite some initial and obvious unease at her presence, it was possible to develop fairly good rapport with most of the IEOS staff, within the limits described above. A second factor should also be noted. While the course took place from May 17 to June 4, only the training which took place from May 19 to 26 was observed which included a non-working Sunday and a one-day national holiday. The days observed were varied enough, however, to be representative of the course as a whole and to provide sufficient basis for the comments that follow.

2.2 Purpose of the Training

The purpose of the training program was to give the IEOS community promoters a general overview of simple construction techniques related to potable water and solid waste disposal systems and of elements of community development and statistical reporting, all of which come under the purview of the promoter's field responsibilities.

Specific objectives outlined in the IEOS training proposal to the USAID Mission were:

1. that the participants acquire theoretical and practical knowledge in the construction of small potable water systems and environmental sanitation in general;

2. to train and orient the participants in the methodology of the work to be implemented under the AID/IEOS program;
3. to convert the participants into efficient water and sanitation promoters capable of maintaining good human and public relations with the respective institutions;
4. to obtain uniformity in the statistical data of each province.

This was apparently the first formal training event for promoters conducted by IEOS in many years and was undertaken both to give them the basic mechanical/technical skills they would now be needing under the expanded rural potable water program and to give some formal orientation to the new promoters who had been hired for this program. Two later courses are planned, and will focus on specific skills and techniques which need reinforcement after the participants have had further experience in the field.

It is worth noting that the above stated purpose and objectives of the training are quite general, making it difficult to assess the results. Specific knowledge or skills were not spelled out for the participants, such as "the participants will demonstrate knowledge of basic pipe fitting skills required in the construction and maintenance of simple potable water systems by taking apart, assembling and/or repairing 'X' parts." Had they been, the course would have had to have been designed differently in order to produce the desired results.

2.3 Training Site

The training took place in Ambato, Ecuador, a small market city in the Andean highlands, some two and a half hours away from Quito. The training was held in a public health center in the heart of the city. The sessions took place in two rooms, as well as in a courtyard where pipe fitting, plumbing and other mechanical techniques were demonstrated.

The health center was apparently a second choice for the training. Another site with residential facilities was preferred but was not available on the needed dates. The preferred site would undoubtedly have been an improvement, since it would have afforded better opportunities for interaction among the participants and between the participants and training staff, and allowed greater flexibility in the daily class schedule. As it was, the training staff was lodged in one hotel, and the participants made their own arrangements for hotels or other housing throughout the city. (All participants received per diem to cover living expenses in Ambato.)

The training facilities at the health center were adequate, though by no means comfortable by U.S. training facility standards. The rooms were large; windows and natural light were plentiful. There were more than enough chairs available for the number of participants, though the chairs were hard and felt harder with each passing hour. Coffee was served mid-morning and mid-afternoon.

2.4 Training Staff

The training staff consisted of two coordinators, one of whom was also a presenter, and ten guest lecturers, each of whom had primary responsibility for a specific session. Senior promoters acted as demonstration assistants in the practical sessions. The function of the coordinators appeared to be more administrative than substantive. The two coordinators and, with one exception, all of the other presenters were technical staff members of IEOS. The exception was a Peace Corps volunteer who is a master plumber currently working on rural water projects in Ecuador. The IEOS presenters included five sanitary engineers and three members of the Department of Promotion and Sanitary Education. It was not possible to determine the positions or specializations of the remaining two presenters.

Only two of the training staff had any formal background in adult education, training, or human resources development. Of these two, one had taken a course in adult education in Puerto Rico some 20 years ago. The other indicated that he would shortly be completing a doctoral program in adult education, though he did not mention the institution. This was a source of some surprise since the latter presenter (who was also the principal coordinator) proved to be the weakest staff person in terms of process and content. His training approach was traditionally didactic, his presentation superficial and inadequately prepared, and his rapport with the participants uneasy.

All of the presenters used a didactic "lecture" approach. The technical presentations given by the sanitary engineers appeared to be well-organized and clear. Most of the presenters, in spite of their traditional teaching approach, were able to establish an easy relationship with the participants, encouraged questions, and were well-disposed to comment on specific problems encountered by promoters in their field work.

2.5 Participants

The course brought together 40 participants (39 men and one woman), most of whom were rural community promoters employed by IEOS from various parts of the country. A smaller number were inspectors employed by the Ministry of Health. Two participants came from rural community development programs sponsored by a private group, and one participant was a Peace Corps volunteer assigned to the development of rural potable water systems. (This was a different individual than the volunteer included on the training staff.)

While a list of participants, with or without background material, was not available, an individual introduction exercise at the end of the first week (used obviously to fill time) provided some data. Approximately one-third of the group had one to three years of post-secondary education, and about four promoters were continuing their education. Only one or two had studied in fields related to their current work. The group presented considerable diversity in degrees of sophistication as well as in terms of rural or urban origin.

Approximately one-quarter of the group were "new" promoters, having been with IEOS under two years, some considerably less. Other promoters had been with IEOS for many years, some as long as fifteen. This disparity was both a weakness and an advantage of the course. On the one hand it made possible a sharing of experiences and concerns among the older and newer promoters, although the course methodology did not always take full advantage of this opportunity. Nonetheless, sharing, both planned and unplanned, did take place. On the other hand, the disparity in seniority implied different training needs in many cases. As a result, the course at times appeared to be above the heads of some of the newer participants and boring or too basic for the older promoters. When it was suggested, diplomatically, to the course directors that this might be so, they recognized the possibility but felt that there were not enough newer promoters to justify separate courses for each group.

2.6 Course Content

The content of the course focused primarily on the technical aspects of the construction and maintenance of rural water systems, with minimal attention to community development and techniques of motivation and education. At that, the two sessions devoted to community development and education dealt to a large extent with techniques for preparing reports on community statistics and similar data. Specific topics to be covered in the course were:

- General notions of topography
- Potable water
- Pipes and accessories
- Disinfection: hypochlorites
- Domiciliary connections: meters
- Use and maintenance of tools
- Subterranean water: wells and handpumps
- Disposal of excreta in rural areas
- Community development
- Techniques of motivation and education.

The curriculum was divided into 82 hours of theory and 46 hours of practice. In light of the immediate and very practical field responsibilities of the course participants, the curriculum appeared unduly weighted on the side of theory. While the course emphasis on basic aspects of rural water supply and sanitation undoubtedly responded to immediate priorities of the rural potable water program, it is worth commenting on the lack of attention to the areas of community development and education, given the importance of community collaboration to the success of such a program. From the comments of those connected with the development of the course, there was an assumption that the promoters already had the requisite "promotional" skills. Assuming this were true of the more senior promoters (a questionable assumption in terms of their educational backgrounds and the lack of a systematic in-service training program within IEOS), this still did not cover the needs of the new promoters, for whom this course was the first training experience since beginning their current jobs.

Additionally, the two sessions (actually one-and-a-half days out of 16) given over to "promotion" per se were weak, poorly organized, and superficial. These sessions were half theory (much of it beyond the participants) and half instruction on how to fill out statistical reports. While both sessions included comments on the need to use "modern" adult education and communication techniques, these were barely defined, much less explored or practiced.

Based on problems and questions raised during the sessions, one content area that appears to need more training attention is the function of organization and training of the community administrative councils, an important responsibility of the community promoter.

These comments are not intended to minimize the importance of providing training in the primary technical skills that the promoters will be required to use increasingly in the coming months. Rather they are meant to draw attention to other important skill areas that may also require attention in future training programs for this group.

2.7 Course Design, Methods and Approach

The aforementioned ambiguity as to the presence and role of an AID-sponsored observer at the course and a certain reluctance or vagueness on the part of the coordinators in discussing its preparation and underpinnings made it difficult to obtain any hard information in this respect. For the most part, it was necessary to rely on observation and informal comments in order to come to any conclusions with regard to the design, methods and approach used for the course.

2.7.1 Design

No formal course outline or design was available beyond the list of subjects and attendant staff presented in the IEOS training proposal to USAID/Ecuador (obtained after several requests to the coordinators for an outline or schedule that might provide an overview of the proceedings). It is possible that no formal design or outline existed.

2.7.2 Approach

To the extent observed, the approach to training was heavily didactic, emphasizing lecture presentations, with a nod in the direction of more current experiential adult education techniques through the inclusion of two or three field trips, demonstration/practice sessions and at least one practical problem-solving assignment, commented on below.

The flow of subject matter did not appear to be based on careful sequencing. Since the course was essentially billed as an overview, with very general objectives, there did not appear to be a need for the kind of ordered sequencing

which would have led to the building of specific skills. Nonetheless, it would have been useful for the principal coordinator, who was present at all sessions during the period observed, to tie the distinct presentations together through bridging comments either at the beginning or end of each presentation.

2.7.3 Methodology

As indicated above, the course relied heavily on theoretical lectures, periodically relieved by demonstration/practice sessions and some field visits. Without an outline or design it is difficult to assess the final mix over the three-week period, but presumably the ratio of theoretical presentations to practical sessions cited in the proposal to AID was followed (Appendix D).

Most of the lecturers observed made liberal use of a large blackboard and chalk of varied colors to illustrate points or graphically present mechanical systems. A flip chart was available and was used to present previously prepared charts.

The presenters did not make use of classroom exercises or small-group work, which would have gone far to relieve the monotony of the lecture approach. It would have been particularly effective to actively involve the participants in the learning process through problem-solving, discussions, and sharing and analysis of results among groups.

While the lectures were indeed appropriate in some of the technical segments where they were accompanied by blackboard illustrations, they were particularly ineffective during the two sessions on motivational and educational techniques. These sessions would have been ideally suited to large- and small-group work, case study exercises, analysis of on-the-job situations, and demonstration and practice of varied motivational, communication, group, and nonformal education techniques. None of this happened. It is ironic that both of the presenters for these sessions spoke about the need for the promoters to use the techniques of modern adult education in their work, but neither presenter followed these techniques in his own session. Had they done so, the participants would have had useful models for their own work in the field.

The one practical demonstration session observed--on pipe fitting--while useful as far as it went, could have been improved by more planned and structured "hands-on" practice of the demonstrated techniques by the participants themselves. The session began with a brief lecture presentation, and then went on to demonstrations of disassembly and re-assembly by several of the more senior promoters. A literal truckload of varied pipes and mechanical units was arrayed on a large table and in an adjoining enclosed parking lot, and the participants moved from site to site for a period of two hours, watching demonstrations and occasionally trying their hands at certain processes. Most listened to explanations and observed. There would have been ample time for

each participant to be put through his/her paces since halfway through the session approximately half of the group had gotten what they could or wanted out of the demonstrations, and started informal discussions, wandered off, or sat about reading newspapers. Some, but not all, of this group were "older" promoters.

The use of senior promoters in demonstrating and explaining technical procedures was particularly effective in this session. The senior promoters could also have been used to good advantage in the sessions on community development. In fact, the participants in one of these sessions were given a problem solving homework assignment involving three-person teams of experienced and newer promoters, but this assignment would have been even more effective had it been carried out in class, with sharing of experiences and results within the total group, and the task completed. As it was, the teams were required to hand in written reports several days later, which were to be graded by the instructor.

2.7.4 Materials

There was modest use of handouts and reference materials (Appendix E) during the observed sessions, most of them samples of administrative forms to be used in keeping community records and statistical reports, a topic that took up a substantial portion of one of the sessions on community development. A copy of a booklet on the laws and regulations pertaining to the administrative councils for rural potable water systems was also distributed at this session. Only one graphic handout was distributed during one of the technical sessions. At a later point in the course the participants were to receive a thick, two-volume manual prepared for supervisors of water systems, which the observer was able to peruse only briefly. It appeared to cover a variety of technical and possibly some community development topics and, from this superficial review, appeared to be a useful reference resource. The manual had apparently been used at a course in sanitary engineering in Peru and was copied in quantity for the group in Ambato.

The sessions on promotional activities would also have benefited by handouts and/or reference materials on community development or educational techniques.

2.7.5 Field Trips

Two field trips took place during the observation period, one to the municipal water treatment system of Ambato and the other to a rural potable water system in a village about an hour's distance from the city. These served to illustrate lectures given during the week and provided opportunities for practical exercises at both locations. The two tasks required the participants to individually sketch and identify the principal units of the Ambato water systems and to gather topographical data in assigned teams at the rural village. Both tasks were handed in to the coordinator in written form and returned several days later with comments. As noted above, the benefit of these assignments would have been augmented had they been reviewed and shared together in subsequent classwork.

2.7.6 Monitoring and Evaluation

It is doubtful that a formal plan for monitoring and evaluating the training existed. No apparent monitoring took place during the first week. It would have been useful to pull the participants in at the end of that week in order to determine whether the course was meeting their needs and expectations. Through conversations with several of the coordinators, I had the impression that little thought had been given to the monitoring or evaluation of the course.

There was some comment about testing the participants through a verbal question and answer session during the last week and about a post-course evaluation through observation of the work of the promoters in the field, but these appeared to be possibilities rather than steps in a firm plan. A clearly articulated formative and summative evaluation plan, built into a course design, would have been extremely useful. This would have provided greater clarity and specificity for the course objectives and permitted mid-course corrections in the training design as needed.

Chapter 3

FINDINGS AND RECOMMENDATIONS

3.1 Findings

As a general overview, the course appeared to respond adequately to its broad objectives, although even on the level of a general orientation, it could have been improved. On the positive side it provided the first training experience in many years for IEOS promoters that was especially useful for the newer participants; it provided a technical orientation that undoubtedly served as a useful refresher for the more senior promoters and was vital to the work of the newer ones; it gave promoters from many parts of the country an opportunity to meet and share experiences with one another for the first time giving them a much needed sense of support and "esprit de corps"; and while the heterogeneity of the participant group in terms of seniority of service weakened the potential effectiveness of the course for some, it did add an important dimension to the aspects of interpersonal sharing and support.

On the other hand, the course was designed and organized by individuals with little background in modern training design and methods. As a result, the course lacked a sharpness of purpose and internal cohesion that could have produced more tangible results. The course did not appear to be the result of a systematic needs assessment that would have taken into account both institutional and program objectives and current performance of the community promoters. Its general objectives were not defined in terms of specific outcomes, nor was there a design that would have led to those outcomes; the approach to training relied heavily on lectures with little opportunity for participant interaction that would have honed problem-solving abilities and increased the sharing of ideas and experiences; the ratio of theoretical presentations to practice was weighted heavily toward the former for a group that urgently needed practical skills; little if any thought had been given to monitoring or evaluation procedures and, as a result, the course organizers had no way of determining how well the training activity was accomplishing even its broad objectives.

3.2 Recommendations

Based on the findings of this observation, it is recommended that:

1. IEOS organize and implement an ongoing professional development program for its community promoters. Training for the promoters should be provided periodically and should be based on systematic performance appraisal and training needs assessment.
2. The training function of the Department of Promotion and Sanitary Education should be under the direction of a Human Resources Development specialist with a proven background in modern approaches to

adult education and human resources development. Such a specialist could be identified locally with relative ease, since Ecuador does have resources in this field.

3. The professional staff of the Department of Promotion and Sanitary Education should be provided with updated, periodic in-service training and development opportunities, particularly in the areas of adult education, community organization and development, and development communication techniques. This could be accomplished through in-country courses and seminars and/or through similar events in other countries.
4. The Department of Promotion and Sanitary Education should conduct a two-stage evaluation of the course in Ambato. This should consist of:
 - a) An immediate post-course meeting of those responsible for the design and implementation of the course to determine to what extent the event met their own expectations and fulfilled its stated objectives, which aspects of the course were most successful by these criteria and which could have been improved, and what was learned with respect to course design, organization, and implementation that could be applied to future training activities.
 - b) A follow-up evaluation should take place in the field in about six weeks to two months, taking into account the participants' delayed reaction to the course itself and their own perception of future training needs, as well as an appraisal of their performance by their supervisors. This process would serve both as a training needs analysis for other courses planned for the promoters in the coming months and as useful feedback in improving the approach, design, and methodology of future courses.
5. The objectives of future IEOS courses should be stated, whenever possible, in specific, measurable, behavioral terms.
6. Course methodologies should emphasize to the extent feasible, guided student participation and activity rather than lectures, and give greater weight to practice than theory.
7. Course designs should include formal plans for course management, monitoring, and evaluation.
8. When possible, courses should take place at residential training sites in order to provide greater flexibility in scheduling and encourage interaction between the participants themselves and between the participants, training staff, and other faculty.

- 9. Future courses should utilize more varied instructional techniques, such as group work, "hands-on" practice of technical processes, model-building, role-playing, case-studies, design of educational/motivational graphics, and take advantage of instructional media such as films, film strips, transparencies, etc.
- 10. Team building between community promoters and sanitary engineers should be encouraged through one or more joint sessions at future courses. These sessions should focus on technical matters and/or problem-solving around mutual concern that are identified either prior to or during the course.

Chapter 4

CONCLUSION

While conditions for this observation were not optimal in terms of the ambiguity of the observer's role with respect to IEOS, it was a useful intervention from several points of view:

- o A number of areas for improving IEOS training activities and capability were identified. This information was shared verbally and in writing with USAID/Ecuador immediately after the observation and was received with interest.
- o While the findings of the consultant were not shared immediately with the IEOS staff (they were to receive them from AID in a modified form), their interest in improving and updating their approach to course development was stimulated through informal conversations and comments during the observation and in visits to the Department of Promotion and Sanitary Education in Quito. One indication of this interest was interest in assistance in the preparation of future courses. The consultant did emphasize that competent local resources were available for such assistance.
- o Some suggestions were advanced for improving the courses in progress in Ambato, and at least one suggestion was acted on by (USAID).

As a final comment it should be noted that the USAID staff collaborated generously in providing information and facilities to carry out the assignment. This assistance contributed in no small way to the results of the consultation.

APPENDIX A

WATER AND SANITATION FOR HEALTH (WASH) PROJECT
ORDER OF TECHNICAL DIRECTION (OTD) NUMBER 96
May 15, 1982

James Gresser & McKee, Inc.
WASH PROJECT

MAY 24 1982

TO: Dennis Warner, Ph.D., P.E.
WASH Contract Project Director

FROM: Victor W.R. Wehman, Jr., P.E., R.S. *QWW*
A.I.D. WASH Project Manager
A.I.D./S&T/H/WS

SUBJECT: Provision of Technical Assistance Under WASH Project Scope of Work
for U.S. A.I.D./Ecuador

REF: A) Quito 3437

1. WASH contractor requested to provide technical assistance to U.S. A.I.D./Ecuador as per Reference A, paragraph 2-5.
2. WASH contractor/subcontractor/consultants authorized to expend up to thirty (30) person days of effort over a two (2) month period to accomplish this technical assistance effort.
3. Contractor authorized up to twenty-two (22) person days of international/domestic per diem to accomplish this effort.
4. Contractor to coordinate with LAC/DR/HN, (P. Feeney), LAC/DR/ENGR, (C. Mathews) and Desk Officer (R. Lindsay) and should provide copies of this along with periodic progress reports and ETA information as requested by LAC or S&T/H personnel.
5. Contractor authorized to provide up to one (1) international round trip from consultants' home base through WASH CIC to Quito, Ecuador and return to home base through Washington, D.C. during life of OTD.
6. Contractor authorized local travel within Ecuador as necessary and appropriate to carry out technical assistance effort NTE \$400 (four hundred) without prior written approval of WASH Project Manager.
7. Contractor authorized to obtain local secretarial, graphics or reproduction services in Ecuador as necessary to accomplish tasks, especially draft report for Mission.
8. Contractor authorized to provide for taxi rental if necessary to facilitate effort.
9. WASH contractor will adhere to normal established administrative and financial controls as established for WASH mechanism in WASH contract.
10. WASH contractor should definitely be prepared to administratively or technically backstop field consultant or subcontractor on this effort.

11. Contractor's consultant should leave a draft report on his/her findings and discuss with Dr. Farr or U.S. A.I.D. before returning to U.S. Final report to Mission should occur within 30 days of return of consultant to the U.S.
12. Mission should be contacted immediately and technical assistance initiated before 18 May 82.
14. Appreciate your prompt attention to this matter. Good luck!

UNCLASSIFIED

UNCLASSIFIED

Department of State

INCOMING - TELEGRAM

PAGE 01 QUITO 03437 142143Z
ACTION A10-35

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ACTION OFFICE LADR-03
INFO LASA-03 LADP-03 AAST-01 STAG-02 STHC-01 ENGR-02 IT-06
HNS-09 ATPC-04 RELO-01 TELE-01 MAST-01 DO-01 /036 A1 414

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FM AMEMBASSY QUITO
TO SECSTATE WASHDC IMMEDIATE 4345

UNCLAS QUITO 3437

AIDAC

FOR: LAC/DR/HNP, P. FELLEHY - ST/H/WS, V. WEHMAN

E.O. 12065: N/A
SUBJECT: WASH PROJECT TA FOR UPCOMING COURSE FOR SANITARY PROMOTERS

1. BETWEEN 17 MAY AND 4 JUNE 1982, I.C. IN CONJUNCTION WITH AID AND PEACE CORPS, WILL BE GIVING A 3 WEEK CLASSROOM AND FIELD DEMONSTRATION COURSE IN AMBATO, ECUADOR AT THE JEFATURA DE SALUD.

2. THE PURPOSE OF THIS COURSE IS TO PROVIDE TECHNICAL INFORMATION AND TRAINING TO COMMUNITY PROMOTER PERSONNEL FROM 18 PROVINCES IN ECUADOR THAT ARE CURRENTLY RESPONSIBLE FOR DEVELOPING COMMUNITY ORGANIZATION, PARTICIPATION AND SUPPORT FOR RURAL WATER SUPPLY AND SANITATION PROJECTS THROUGHOUT ECUADOR. THESE PROMOTERS ARE TO BE TRAINED HOPEFULLY TO RESULT IN A PARA-ENGINEER TYPE PERSON THAT CAN FUNCTION NOT ONLY WITH COMMUNITY ORGANIZATION BUT ALSO CAN FUNCTION AS GUIDERS OR SUPERVISORS OF TECHNICAL STUDIES OR CONSTRUCTION OF WATER AND EXCRETA DISPOSAL SYSTEMS IN THE RURAL COMMUNITIES.

3. THE USAID REQUESTS THE WASH PROJECT TO PROVIDE AN INTERNATIONALLY EXPERIENCED, SPANISH-SPEAKING AND READING (S-3/R-3) AT LEAST) ENVIRONMENTAL HEALTH TRAINING RESOURCE PERSON TO ATTEND THIS COURSE AS A PASSIVE OBSERVER. THE OBSERVER WILL HAVE THE RESPONSIBILITY OF CLOSELY MONITORING AND DOCUMENTING THE EXISTING COURSE MATERIAL AND DETAILEDLY MAKING NOTES ON THE STRENGTHS AND WEAKNESSES AND APPROPRIATENESS OF THE MATERIALS PRESENTED AND THE STYLE/QUALITY OF TRAINING TAKING PLACE. THE INDIVIDUAL WILL MAKE HIS/HER REPORT DIRECTLY TO THE USAID HEALTH OFFICER (DR. KEN FARR AFTER THE COURSE IS OVER.)

4. THE WASH PROJECT MANAGER (V. WEHMAN) IS NOW IN ECUADOR AND FULLY SUPPORTS THIS REQUEST. THIS COURSE IS BELIEVED BY VARIOUS USAID OFFICIALS TO HAVE BEEN WELL PREPARED AND THE TECHNICAL REVIEW OF MATERIALS PRESENTED AND TRAINING METHODOLOGIES USED WILL BE OF GREAT BENEFIT AND PROVIDE INSIGHTS INTO THE LEOS STRENGTHENING ASPECTS OF THE RURAL WATER SUPPLY LOAN NOW GOING ON IN ECUADOR.

5. USAID REQUESTS WASH TA FOR ABOUT 30 PERSON DAYS OF TECHNICAL ASSISTANCE WITH A DRAFT REPORT BEING LEFT AT MISSION BEFORE THE RURAL WATER SUPPLY AND SANITATION TRAINING CONSULTANT LEAVES THE COUNTRY. USAID REALIZES THAT NOT MUCH NOTICE FOR THIS REQUEST HAS BEEN GIVEN, BUT APPRECIATES THE WASH AND ST/HEALTH ASSISTANCE IF IT IS POSSIBLE. CONTACT IS THE MISSION WILL BE DR. FARR. WEHMAN (ST/HEALTH) HAS ALERTED WASH AS TO THE POSSIBILITY OF THIS REQUEST ON PM OF 12 MAY 82. WASH CONTACT IS D. DONALDSON.

WEST

TV
Vic
Antonio

TO WASH: 25 May 82 JLS

UNCLASSIFIED

UNCLASSIFIED
Department of State

OUTGOING
TELEGRAM

PAGE 01 STATE 134448
ORIGIN AID-20

8127 893541 AID5577

ORIGIN OFFICE SIHE-01
INFO LAEM-02 LASA-03 LADP-03 LADR-03 AAST-01 RELO-01 MAST-01
7V-00 /015 A0

INFO OCT-00 /020 R

DRAFTED BY AID/ST/H/WS: FEMCJUNKIN: SMS
APPROVED BY AID/ST/H: CAPEASE
AID/ST/H/WS: VWEHMAN (INFO)
AID/LAC/DR/HN: PFEENEY (PHONE)
AID/LAC/DR/ENGR: CMATHEWS (INFO)
AID/LAC/SA: RLINDSAY (PHONE)

~~WEHMAN~~
AUSTIN J (P)
JK

-----023371 180711Z /38

P 180423Z MAY 82
FM SECSTATE WASHDC
TO AMEMBASSY QUITO PRIORITY

UNCLAS STATE 134448

ADM AID - PASS TO KEN FARR, HEALTH OFFICER

E.O. 12065: N/A

TAGS:

SUBJECT: HORTENSE DICKER CONSULTANCY

REF: (A) QUITO 3437 (B) FARR/MCJUNKIN TELECOM, 17 MAY 82

1. PER REFTEL AND TELECOM, WASH CONSULTANT HORTENSE
DICKER TO ARRIVE QUITO VIA FLIGHT EUO 71 AT 1700 HOURS,
TUESDAY, MAY 18, FOR 7-10 DAY TRAINING CONSULTANCY. PLEASE
MAKE HOTEL RESERVATIONS AT HOTEL QUITO. OTD WILL BE
POUCHED TO MISSION AT LATER DATE. STOESSEL

TO WASH 21 May 82 JAC

UNCLASSIFIED

NOTION
COPY

UNCLASSIFIED
Department of State

ROUTING
TELEGRAM

PAGE 01
ACTION AID-35

QUITO 03533 191917Z

7232 096577 AID7575

ACTION OFFICE STHE-01
INFO LAEM-02 LASA-03 LADP-03 LADR-03 PERS-05 AAST-01 CH10-01
RELO-01 MAST-01 /021 A4 820

INFO OCT-00 ARA-16 AMAD-01 /052 W

-----120256 .192210Z /38

FR 191646Z MAY 82
FM AMEMBASSY QUITO
TO SECSTATE WASHDC 4390

UNCLAS QUITO 3533

AIDAC

FOR: S&T HEALTH

EE.O. 12065; N/A

SUBJECT: TDY OF HORTENSE DICKER, MAY 18-28

REF: -A) TELCON MCJUNKIN/FARR 5/17/82; B) QUITO 3437

MISSION CONCURS WITH SUBJECT TDY, PER REQUEST IN
REF B.
WEST

Received STH (Wehmann) 5-21-82
Passed to WASH 5-21-82

UNCLASSIFIED

Appendix B

ITINERARY

- May 18 - Departure from Washington, D.C.
Arrival in Quito, Ecuador
- May 19 - Travel to Ambato to visit training program
- May 22 - Travel to Quito
- May 26 - Travel to Ambato
- May 27-28 - Preparation of report and debriefing in Quito
- May 29 - Return to U.S.

Appendix C

LIST OF PEOPLE CONTACTED

Dr. Kenneth Farr
Health Officer
USAID/Ecuador

Ing. Jorge Mayorga
Presenter at Training
Program
IEOS

Herb Caudill
Sanitary Engineer
USAID/Ecuador

Ing. Jorge Mora
Presenter at Training
Program
IEOS

Lic. Eduardo Coral
Head, Department
of Promotion and Education
IEOS

Paul Meissner
Participant
Peace Corps Volunteer

Lic. Galo Cuaspaz
Chief Coordinator
of Training Program
IEOS

Mr. Boudreaux
Presenter at Training
Program
Peace Corps Volunteer

Lic. Jorge Munide
Asst. Coordinator
of Training Program
IEOS

APPENDIX D

CURSO DE ORIENTACION SANITARIA PARA PROFESIONALES QUE
TRABAJAN EN EL PROGRAMA A.I.D - IEOS.1. Justificación del curso:

La Agencia Internacional para el Desarrollo "A.I.D." y el Instituto Ecuatoriano de Obras Sanitarias, suscriben un convenio mediante el cual construirán 46 sistemas de abastecimiento de agua potable y 700 pozos en varias comunidades rurales de las provincias de Cotopaxi, Chimborazo y Manabí; bajo la responsabilidad de Promotores profesionales y la supervisión directa de Ingenieros Sanitarios de nivel central y provincial del IEOS. Para que el personal de promotores asignados al programa, cumplan con responsabilidad las funciones a ellos encomendadas y haya uniformidad en su comportamiento social y en estadísticas, se hace necesario y urgente capacitar a este personal en técnicas sencillas de construcción de sistemas de agua potable y eliminación de excretas, así como conocimientos de desarrollo de la comunidad, informes estadísticos, etc. capacitación que será en forma escalonada.

2. Objetivos:2.1 Generales

2.1.1 Lograr que los participantes adquieran conocimientos teóricos y prácticos, relacionados con la construcción de pequeños sistemas de agua potable y en general saneamiento ambiental.

2.1.2 Capacitarlos y orientarlos en la metró-

logía de trabajo que se va a implementar en el programa AID/IEOS.

2.1.3 Conseguir que se conviertan en eficientes empleados sanitarios, manteniendo buenas relaciones humanas y buenas relaciones públicas con las instituciones.

2.1.4 Obtener uniformidad en los datos estadísticos de cada provincia.

3. Áreas específicas del curso

- 3.1 Conocimientos elementales de topografía
- 3.2 Descripción de un sistema de agua potable rural
- 3.3 Tuberías y accesorios
- 3.4 Abastecimientos de agua por bombeo
- 3.5 Desinfección
- 3.6 Conexiones domiciliarias
- 3.7 Herramientas
- 3.8 Disposición de excretas en el área rural
- 3.9 Desarrollo de la comunidad
- 3.10 Técnicas de Promoción y Educación (uso de formularios)

4. Duración del curso

Tiempo: 128 horas laborables (del 10 al 28 de mayo de 1982)

Lugar donde se dictará el curso: Ambato

5. Recursos humanos

- Director del curso: Ing. Mario Tobar
JEFE UNIDAD SANEAMIENTO
BASICO RURAL
- Coordinador: Lcdo. Galo Cuasapaz
EDUCADOR SANITARIO

6. Grupo humano al que va dirigido el curso

26 participantes

Nivel: secundario

Procedencia: Promotores sanitarios que van a trabajar en los proyectos AID/IEOS en saneamiento ambiental y programas propios del IEOS.

7. Recursos del curso

7.1 Recursos humanos

- 4 Ingenieros Sanitarios
- 2 Educadores Sanitarios
- 1 Técnico de herramientas
- 1 Promotor Sanitario

7.2 Materiales

- Poligrafiados
- Rotafolios
- Materiales: tubería, accesorios, herramientas

8. Presupuesto

| 8.1 <u>Materiales</u> | <u>Valor</u> |
|-----------------------------|-----------------|
| 20 pliegos de papel bond | S/. 80,00 |
| 6 marcadores gruesos | 210,00 |
| 12 marcadores finos | 348,00 |
| 1 caja de tizas de colores | 70,00 |
| 25 carpetas plásticas | 1.000,00 |
| 3 docenas de lápices | 270,00 |
| 3 docenas de esferográficos | 288,00 |
| 25 cuadernos universitarios | 1.000,00 |
| 25 flexómetros | 4.500,00 |
| 1 borrador pizarrón | 40,00 |
| 25 tablas porta-mano | <u>2.000,00</u> |
| | S/. 9.806,00 |

8.2 Manuales

| | |
|---|------------------|
| 6 resmas papel bond | S/. 11.400,00 |
| 20 cartulinas para carátulas | 240,00 |
| 5 cajas películas Kodalito | 42.825,00 |
| 2 galones de revelador | 720,00 |
| 3 galones fijador | 375,00 |
| 5 cajas matrices aluminio | 2.000,00 |
| 3 galones tinta multilith | 1.341,00 |
| 25 bombas de mano | 12.500,00 |
| 25 manuales supervisión sistemas rurales de agua potable | <u>12.500,00</u> |
| | S/. 83.871,00 |

| 8.3 <u>Herramientas</u> | <u>P.Unitario</u> | <u>Total</u> |
|------------------------------------|-------------------|---------------|
| 10 arcos de sierra | 35,00 | 3.500,00 |
| 30 sierra corta-hierro | 30,00 | 900,00 |
| 6 llaves inglesas N° 14 | 80,00 | 480,00 |
| 6 llaves inglesas N° 12 | 80,00 | 480,00 |
| 6 llaves de pico | 80,00 | 480,00 |
| 3 tarrajas 1/2 a 2" | 2500,00 | 7.500,00 |
| 1 tarrajas 7/16 | 2500,00 | 2.500,00 |
| 3 mordazas | 600,00 | 1.800,00 |
| 6 desarmadores planos | 30,00 | 180,00 |
| 6 desarmadores en cruz | 30,00 | 180,00 |
| 6 playos | 100,00 | 600,00 |
| 10 comparadores de cloro | 1100,00 | 11.000,00 |
| 4 medidores de agua | 1200,00 | 4.800,00 |
| 1 hipoclorador (500 l) | 5050,00 | 5.050,00 |
| 1 tambor hipoclorito (45 Kilos) | 3375,00 | 3.375,00 |
| 4 tubos pega permatex | 94,00 | 376,00 |
| 3 llaves de boca 7/16 | 190,00 | <u>270,00</u> |
| | S/. 55.971,00 | |

. /

8.4 Viáticos: docentes y alumnos

- Viáticos financiados para 12 alumnos, a razón de 550,00 - por 20 días. S/. 132.000,00
- Viáticos y estipendios, para 5 alumnos a financiar AID, a razón de S/. 11.000,00 por 20 días 55.000,00
- Viáticos financiados por el IEOS, para docente y coordinador del curso, según distribución de horas 60.000,00

| RESUMEN | FINANCIAMIENTO | | |
|---|-------------------|-------------------|-------------------|
| | AID | IFOS | TOTAL |
| - Útiles escritorio y otros. | S/. 9.806,00 | S/. ----- | S/. 9.806,00 |
| - Publicaciones de Manual | 83.871,00 | ----- | 83.871,00 |
| - Herramientas | 55.971,00 | ----- | 55.971,00 |
| - Viáticos 12 alumnos | ----- | 132.000,00 | 132.000,00 |
| - Viáticos y estipendios para 5 alumnos | 55.000,00 | ----- | 55.000,00 |
| - Viáticos docente y coordinador | ----- | 60.000,00 | 60.000,00 |
| TOTAL: | 204.648,00 | 192.000,00 | 396.648,00 |

SON: TRESCIENTOS NOVENTA Y SEIS MIL SEISCIENTOS CUARENTA Y OCHO SUCRES, 00/100

9. Financiamiento

- Instituto Ecuatoriano de Obras Sanitarias
- A.I.D.

10. Evaluación

- Mediante observación directa de los instructores
- Al final del curso, se aplicará una prueba de conocimientos.

Contenido de las materias a dictarse en el curso

1. Nociones generales de topografía
2. Descripción de un sistema de agua potable
 - Generalidades, aforo, medidores de agua
 - Captación: superficial, subterránea, conducción
 - Desarenador, sedimentador
 - Filtración: ascendente, descendente lenta, rápida, dinámica
 - Desinfección: Cloradores de agua, hipocloradores. Dosificación, cloro residual.
 - Almacenamiento - reserva
 - Red de distribución
 - Conexiones domiciliarias
3. Tubería y accesorios:
 - Introducción
 - Tamaño del tubo (diámetro)
 - Dotación o cantidad de agua necesaria para cada habitación
 - Cuán resistentes deben ser tuberías y accesorios
 - De qué material debe ser la tubería y los accesorios
 - Materiales de tubería y accesorios: plástico, polietileno, asbesto-cemento, hierro galvanizado
4. Desinfección
 - Introducción
 - Dosificación
 - Tipos de cloración
 - Hipoclorador
 - Cloro residual
5. Conexiones domiciliarias:
 - Qué comprende una conexión domiciliar

- Medidores: tipos, instalación, lectura, mantenimiento.
- Grifos públicos.

6. Herramientas

- Clase de herramientas que se utilizan en estos trabajos: sierras para cortar tubos, abrazaderas, llaves, etc.
- Cómo deben usarse
- Cómo deben mantenerse.

7. Agua subterránea

- Excavación del pozo: aforo
- Revestimiento del pozo
- Desinfección del pozo
- Instalación de la bomba
- Operación y mantenimiento del pozo.

7.1 La bomba manual

- Generalidades
- Conocimiento de partes integrantes de la bomba
- Precauciones en la instalación de la bomba
- Normas de mantenimiento

8. Disposición de las excretas en el área rural

- Letrina sanitaria
- Bacinete campesino
- Letrina de doble bóveda
- Otros tipos de letrina

9. Desarrollo de la comunidad

- Organización de Juntas Administradoras y Comités de Salud.

10. Técnicas de Promoción y Educación

- Utilización de formularios

11. Prácticas

cc/rdg

15.IV.82

DISTRIBUCION DE HORAS DE CLASE EN EL CURSO

| N° | TEMAS | HORAS | | DOCENTE |
|----|---|-------|-----------|---|
| | | T | P | |
| 1 | Nociones generales de Topografía | 8 | 4 | Ing. Mora, Jefatura de Tungurahua |
| 2 | Agua potable | 16 | 8 | Ing. Jorge Mayorga, Ing. Milton Silva |
| 3 | Tubería y accesorios | 8 | 4 | Ing. Jorge Erazo y Promotor Sanitario |
| 4 | Desinfección: Hipocloradores | 3 | 5 | Ing. Sanahuano |
| 5 | Conexiones domiciliarias: medidores | 4 | 2 | Ing. Sanahuano, Señor Ayala |
| 6 | Herramientas: uso y mantenimiento | 3 | 5 | Señor Miguel Insuasti |
| 7 | Aguas Subterráneas: pozos y bombas manuales | 12 | 12 | Lcdo. Homero Morales, Sr. Boudrau - Cuerpo de Paz |
| 8 | Disposición de excretas Area Rural | 6 | 4 | Lcdo. Homero Morales y Promotor Sanitario |
| 9 | Desarrollo de la comunidad | 6 | 2 | Lcdo. Eduardo Coral |
| 0 | Técnicas de Promoción y Educación | 6 | - | Lcdo. Galo Cuasapaz |
| | Sub-total | 82 | 46 | |
| | TOTAL: | | 128 horas | |

CURSOS DE ADISTRAMIENTO EN SERVICIO PARA PROMOTORES TECNICOS
EN SANEAMIENTO, CON EL AUSPICIO DE AID/IEOS.

1. Curso sobre instalación, operación de bombas de mano.
 - Duración del curso: 8 días
 - N° de participantes: 30
 - Fecha probable: Septiembre 1982
 - Costo aproximado: S/. 160.000,00

 2. Curso sobre plomería
 - Duración: 8 días
 - N° de participantes 30
 - Fecha probable: Noviembre de 1982
 - Costo aproximado: S/. 160.000,00
- TOTAL: S/. 320.000,00

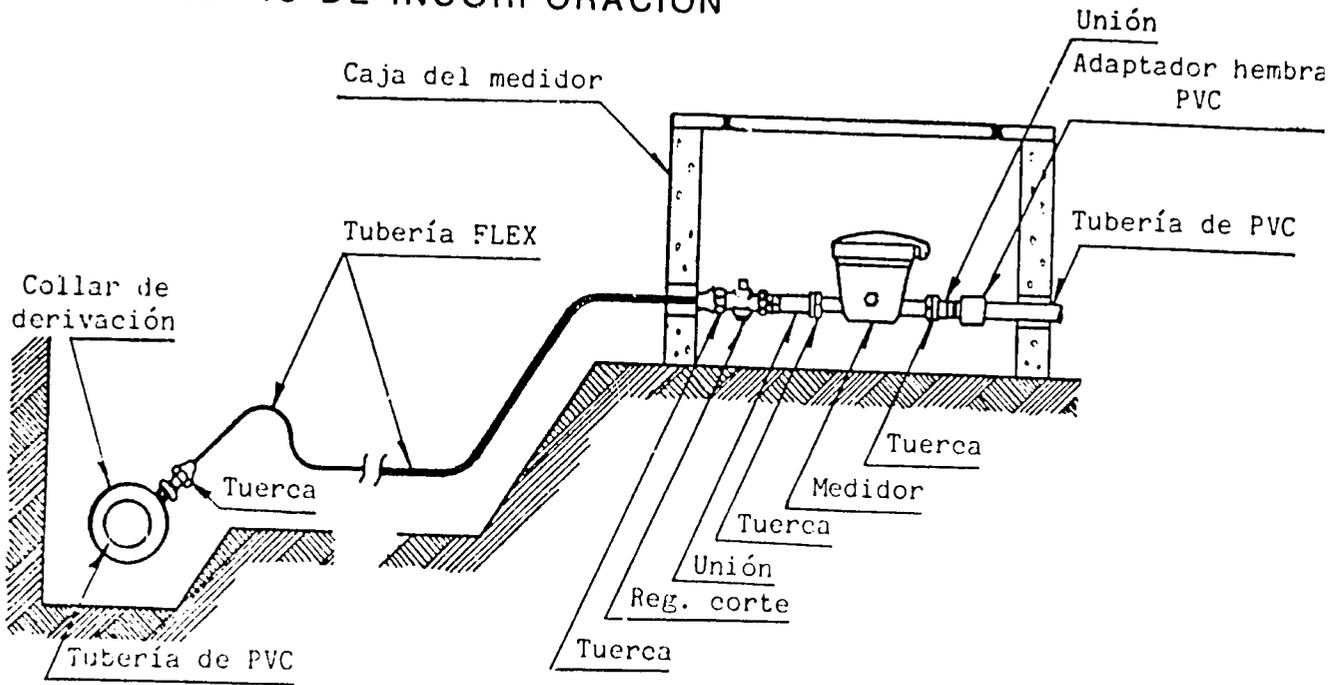
FINANCIAMIENTO

1. Agencia Internacional para el Desarrollo
 - Materiales y equipos S/. 200.000,00
- TOTAL: 200.000,00
-
2. IEOS:
 - Viáticos para participantes y docentes - IEOS S/. 120.000,00
- TOTAL; 120.000,00

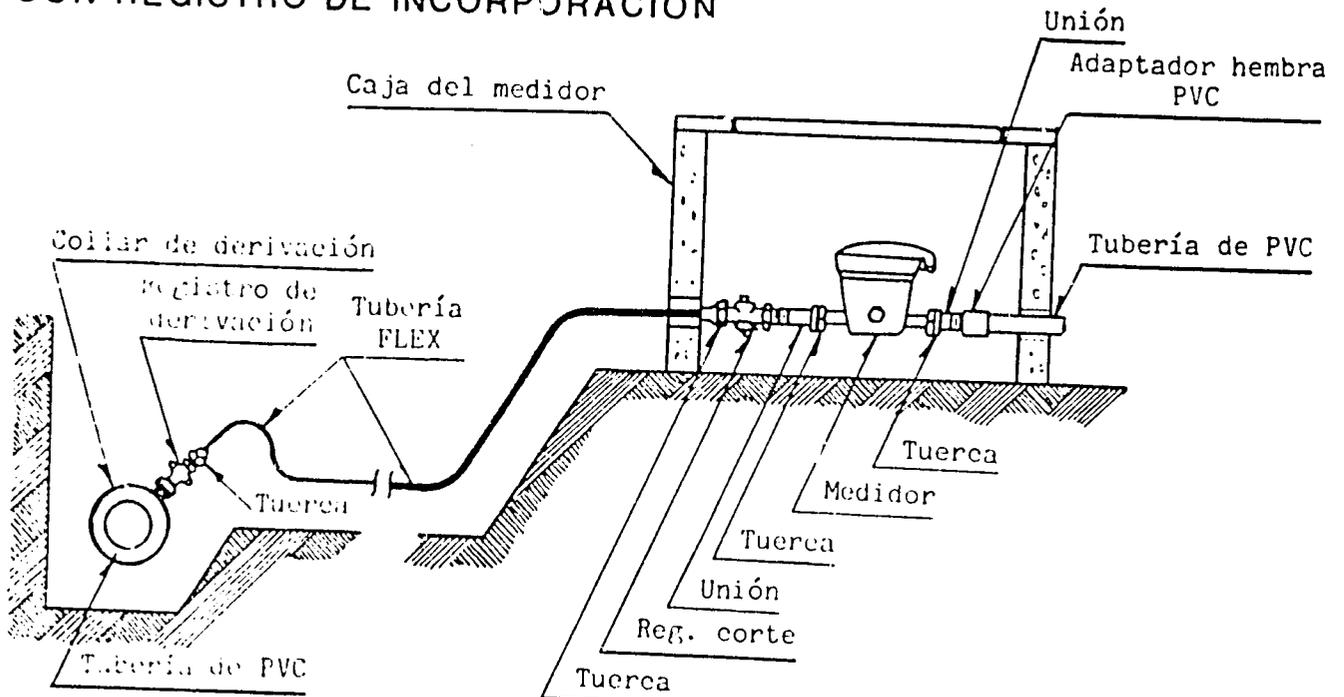
GC/rdg
16.IV.82

APPENDIX E
ACOMETIDAS DOMICILIARIAS

SIN REGISTRO DE INCORPORACION



CON REGISTRO DE INCORPORACION



INSTITUTO ECUATORIANO DE OBRAS SANITARIAS

RECONOCIMIENTO BASICO DE COMUNIDAD

DEPARTAMENTO DE PROMOCION Y EDUCACION .

I. DATOS GENERALES

1.1. PROVINCIA: _____ CANTON: _____
PARROQUIA: _____ LOCALIDAD: _____

1.2. Distancias: A la capital provincial Km. _____
A cabecera cantonal: Km. _____
A cabecera parroquial: Km. _____

1.3. Vías de acceso más usuales (Enumere)

1.4. Tipo de corriente eléctrica que dispone la comunidad:
de 110 V () de 220 V ()
Permanente () Nocturna () horas desde _____ hasta _____

II. POBLACION Y VIVIENDA:

2.1. Nº de familias _____ Nº de habitantes _____ Nº de viviendas _____
Vivienda: Propia Nº _____ Alquilada Nº _____ Local Público Nº _____
Abandonadas: Nº _____ En construcción Nº _____

2.2. Educación: Alfabetos Nº _____ Analfabetos Nº _____
Escuelas Nº _____ Nº de alumnos _____ Nº Profesores _____
Colegios Nº _____ Nº de alumnos _____ Nº Profesores _____
Otros Est.Educ. _____ Nº de alumnos _____ Nº Profesores _____

III. ACTIVIDAD ECONOMICA:

3.1. Personas que trabajan Nº _____
Agrícola-ganadero Nº _____ Empleados Nº _____
Obreros Nº _____ Otros Nº _____
Jornaleros Nº _____
Promedio de ingreso familiar: \$/. _____

...

| Nº | Lugar (nombre) | Distancia a la comunidad | Caudal $Q = l/s$ |
|----|----------------|--------------------------|---------------------|
| A | _____ | _____ | _____ |
| B | _____ | _____ | _____ |
| C | _____ | _____ | _____ |

Observaciones: _____

4.2. Eliminación de excretas:

- La comunidad dispone de alcantarillado público: SI () NO ()
- Este sistema es: completo () Incompleto ()
- Nº Conex. Domicil. _____ Población servida _____
- Inodoros Nº _____

4.2.1. Otros sistemas de eliminación de excretas:

- Sanitario campesino Nº _____ % _____
- Letrinas sanitarias Nº _____ % _____
- Fosas sépticas Nº _____ % _____

4.3. Actitudes de la comunidad:

- Problema sentido Nº _____ % _____
- No sienten el problema Nº _____ % _____
- Hacia el esfuerzo comunitario: Favorable Nº _____ % _____
- Indiferente Nº _____ % _____
- Desfavorable Nº _____ % _____
- Participación comunitaria:
 - Con trabajo Nº _____ % _____
 - Materiales Nº _____ % _____
 - Dinero _____ % _____

V. DATOS COMPLEMENTARIOS:

5.1. Líderes naturales (Nombres) Líderes formales (Nombres)

| | |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

5.2. Agencias de desarrollo que están trabajando en la comunidad.

5.3. Medios de comunicación que llegan a la comunidad:

Teléfono () telégrafo () Correo () Radio ()

Radios más sintonizadas (nombres emisoras) Canales de T.V.

Periódicos:

Cada qué tiempo llegan:

5.4.

5.5. Observaciones:

PROMOTOR RESPONSABLE

FECHA

CHM/szn.
27-XI-79.

| | |
|---|-----------------|
| INSTITUTO ECUATORIANO DE OBRAS SANITARIA CONTROL DE SERVICIOS EN EXPLOTACION DIVISION DE SANEAMIENTO AMBIENTAL PROMOCION Y EDUCACION | PROVINCIA _____ |
| | CANTON _____ |
| | PARROQUIA _____ |
| | LOCALIDAD _____ |
| | DESDE _____ |
| | HASTA _____ |

A.- ADMINISTRACION

1.- SITUACION INSTITUCIONAL

| NOMBRE DEL ENTE COMUNITARIO | FECHA DE CONSTITUCION |
|-----------------------------|-----------------------|
| | |

| DIGNATARIOS | |
|------------------|---------|
| PRINCIPALES | VOCALES |
| PRESIDENTE _____ | |
| SECRETARIO _____ | |
| TESORERO _____ | |

| ASAMBLEAS | FECHA | MOTIVO |
|-----------------------------|-------|--------|
| ASAMBLEA ORDINARIA (ultima) | _____ | _____ |
| ASAMBLEA EXTRAORDINARIA | _____ | _____ |

| REGLAMENTO INTERNO DEL SERVICIO | FECHA | OBSERVACION |
|---------------------------------|-------|-------------|
| EN ELABORACION | _____ | _____ |
| APROBADO POR LA JUNTA | _____ | _____ |
| APROBADO POR EL IEOS | _____ | _____ |

2.- PERSONAL Y SALARIOS

| PERSONAL | | SALARIO MENSUAL S. | APORTE IEOS S. | TOTAL S. | OBSERVACION |
|----------|--|--------------------|----------------|----------|-------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL | | | | | |

3.- DOCUMENTOS CONTABLES.

| ESTADO | LIBRO DE CAJA DIARIO | REGISTRO DE USUARIOS | ESTADO DE CUENTA | LECTURA DE MEDIDOR | PLANILLA DE COBRO | MOVIMIENTO DE CAJA |
|-------------|----------------------|----------------------|------------------|--------------------|-------------------|--------------------|
| NO SE LLEVA | | | | | | |
| SE LLEVA | CORRECTO | | | | | |
| | INCORRECTO | | | | | |

OBSERVACIONES _____

4.- CONEXIONES Y TARIFAS.

| TIPO DE CONEXION | CANTIDAD | | TARIFA BASICA MENSUAL | PRECIO MS DE EXCESO | MOVIMIENTO DE NUEVAS CONEXIONES EN EL PERIODO | | | | | | | | | | | | | |
|------------------|----------|--------|-----------------------|---------------------|---|--------|-------|-------|------|-------|-------|--------|-------|--------|-------|-------|-------|----|
| | CON M. | SIN M. | | | ENERO | FEBRER | MARZO | ABRIL | MAYO | JUNIO | JULIO | AGOSTO | SEPT. | OCTUB. | NOVIE | DICEM | TOTAL | |
| | | | | | M. | M. | M. | M. | M. | M. | M. | M. | M. | M. | M. | M. | M. | M. |
| RESIDENCIAL | | | | | | | | | | | | | | | | | | |
| COMERCIAL | | | | | | | | | | | | | | | | | | |
| INDUSTRIAL | | | | | | | | | | | | | | | | | | |
| EST PUBLICO | | | | | | | | | | | | | | | | | | |
| LLAVES PUBLICAS | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | | | |

5.- MOROSIDAD.

| SANCIONES MOROSOS | N. | SANCIONES | | |
|-------------------|----|-----------|-----------|---------------|
| | | MULTAS N. | CORTES N. | RECONEXION N. |
| DE 1 MES | | | | |
| DE 2 MESES | | | | |
| DE 3 MESES | | | | |
| MAS DE 3 MESES | | | | |

6. ESTADO DE APORTES

| CUENTAS | TOTAL | FIN DEL PERIODO ANTERIOR | PAGO DURANTE EL PRESENTE PERIODO | SALDO A LA FECHA |
|--|-------|--------------------------|----------------------------------|------------------|
| SALDO APORTE COMUNITARIO (20% DEL VALOR DE LA OBRA) | | | | |
| ESTADO DE DEUDA AL IEOS (PAGO DE CONEXION INTRADOMICILIARIA) | | | | |

7. MOVIMIENTO DE CAJA.

| | S. |
|---|----|
| I. INGRESOS | |
| - SALDO ANTERIOR | |
| - POR TARIFAS | |
| - POR MULTAS Y RECONEXIONES | |
| - POR APORTES COMUNITARIOS | |
| - POR TRABAJOS REALIZADOS A PARTICULARES | |
| - PARA AMORTIZAR DEUDA AL IEOS POR CONEXIONES | |
| - DOCUMENTOS POR COBRAR (MOROSIDAD) | |
| TOTAL DE INGRESOS | |
| II. EGRESOS | |
| - SUELDOS Y CARGAS SOCIALES | |
| - HIPOCLORITO, CLORO GAS | |
| - MATERIALES Y MANO DE OBRA | |
| - REMITIDO A IEOS POR AMORTIZACION | |
| - DEUDA (CONEXION INTRADOMICILIARIA) | |
| - OTROS GASTOS | |
| - DOCUMENTOS POR PAGAR | |
| TOTAL DE EGRESOS | |

7.1. BALANCE.

| | | | | |
|-----------------------|-------------|----------|-------|----------|
| INGRESOS A LA FECHA | | | | |
| EGRESOS A LA FECHA | | | | |
| SALDO TOTAL | | | | |
| DEMOSTRACION DE SALDO | EN EFECTIVO | EN | TOTAL | FALTANTE |
| | S/. | S/. | S/. | S/. |

8. OPERACION Y MANTENIMIENTO

8. ESTADO DE INSTALACIONES.

| ITEM | NORMAL | PROBLEMAS EN EL PERIODO | SUBSISTEN PROBLEMAS |
|---------------------------------|--------|-------------------------|---------------------|
| UNIDAD DE TOMA | | | |
| CONDUCCION | | | |
| MOTORES BOMBA | | | |
| TRATAMIENTO | | | |
| AERACION | | | |
| SEDIMENTACION | | | |
| FILTRACION | | | |
| DESINFECCION | | | |
| ELEMENTOS DE MEDICION Y CONTROL | | | |
| INSTALACIONES ELECTRICAS | | | |
| TANQUE Y/O CISTERNA | | | |
| RED DE DISTRIBUCION | | | |
| ESTADO GENERAL | | | |

9. CONTROL DE CALIDAD

| TIPO DE CONTROL | AGUA CRUDA | AGUA TRATADA | OBSERVACION |
|-----------------|------------|--------------|-------------|
| FISICO QUIMICO | | | |
| BACTERIOLOGICO | | | |

10. DESINFECCION

| COLORO | PPM Mg/L | PUNTO DE MEDICION | FECHA | OBSERVACION |
|--------|----------|-------------------|-------|-------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

11. CONSUMO DE PRODUCTOS QUIMICOS

| DESINFECTANTE | CANTIDAD ANTERIOR | CANTIDAD USADA EN EL PRESENTE PERIODO | SALDO A LA FECHA | OBSE RVACION |
|---------------|-------------------|---------------------------------------|------------------|--------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

12. MEDIDORES

| MARCA | TOTAL INSTALADOS | BUEN FUNCIONAMIENTO | DEFECTUOSOS Nr | EN REPARACION Nr | FUERA DE USC Nr |
|-------|------------------|---------------------|----------------|------------------|-----------------|
| | | | | | |
| | | | | | |
| | | | | | |
| TOTAL | | | | | |

DESCRIPCION DE PROBLEMAS

RECOMENDACIONES

FIRMAS RESPONSABLES

Lugar y Fecha

Presidente de la Junta Administradora de Agua Potable

NOTA: Este formulario se llenara en 3 ejemplares: uno para la oficina provincial, uno para la Junta Administradora de Agua y el Departamento de Promoción y Educación del IEOS

| | | | |
|--|---|---|---|
| Ciudad de: Solicitud de Conexión SERVICIO DE AGUA POTABLE No. _____ I. E. O. S. Agua Potable Fecha _____ | | | |
| 1 Propietario y Cédula de Identidad 2 Dirección: | 3 Servicio Solicitado Categoría: Residencial <input type="checkbox"/> Comercial <input type="checkbox"/> Industrial <input type="checkbox"/> Público <input type="checkbox"/> | 4 Diámetro de la Conexión | 5 Tipo de Instalación Nueva <input type="checkbox"/> Provisional <input type="checkbox"/> Servicio sin red <input type="checkbox"/> Cambio Diámetro <input type="checkbox"/> Reinstalación <input type="checkbox"/> |
| 6 Predio No. _____ Avalúo _____ | 7 Firma del Solicitante | | |
| 8 CROQUIS DE LA UBICACION DEL PREDIO | | 9 Inspección Fecha: _____ Firma Inspector _____ Observaciones: _____ | |
| 10 APROBADO Fecha _____ Jefe del Sistema _____ | | | |
| 11 Valor de la Instalación Derecho de Conexión \$ _____ Derecho de servicio \$ _____ Materiales \$ _____ Tubería \$ _____ Otros \$ _____ Total \$ _____ | 12 Medidor Marca: _____ Diámetro _____ Número _____ Localización _____ | 13 Tarifa Categoría _____ Consumo básico M3. _____ Cargo fijo \$ _____ Exceso \$ _____ M3. _____ | |
| 14 Pago de la Instalación Contado <input type="checkbox"/> Crédito <input type="checkbox"/> Cuota inicial \$ _____ Cuota Mensual \$ _____ Plazo _____ Meses | 15 Conexión Fecha: _____ Firma Plomero _____ | | |
| 16 INSCRIPCION Fecha: _____ No. de Cuenta _____ Jefe del Sistema _____ | | | |
| 17 Observaciones: | | | |

Provincia de:

Comunidad:

ESTADO DE CUENTA

- 1.- Nº. de conexión 2.- Apellido y nombre del usuario
- 3.- Dirección 4.- Aparato de control 5.- Consumo básico
- 6.- Clase de consumo. Doméstico: ; Comercial: ; Industrial: ; Establec. Público:
- Año:

| | ESTADO DE MEDIDOR | | CONSUMO EN M ³ | | | TARIFA EN \$ | | | Otros concepto \$ | DEUDA EN \$ | | | Fecha de Pago | |
|------------|-------------------|----------|---------------------------|--------|-----------|--------------|-----------|-------|-------------------|---------------|----------|-------|---------------|-------|
| | Actual | Anterior | Leído en el mes | Básico | Excedente | Cargo fijo | Excedente | Total | | Total del mes | Anterior | Total | | Pagos |
| Julio | | | | | | | | | | | | | | |
| Agosto | | | | | | | | | | | | | | |
| Septiembre | | | | | | | | | | | | | | |
| Octubre | | | | | | | | | | | | | | |
| Noviembre | | | | | | | | | | | | | | |
| Diciembre | | | | | | | | | | | | | | |

Observaciones:

Junta Administradora del Abastecimiento de Agua Potable

Provincia de:

Comunidad:

ESTADO DE CUENTA

- 1.- Nº. de conexión 2.- Apellido y nombre del usuario
- 3.- Dirección 4.- Aparato de control 5.- Consumo básico
- 6.- Clase de consumo. Doméstico: ; Comercial: ; Industrial: ; Establec. Público:
- Año:

| | ESTADO DE MEDIDOR | | CONSUMO EN M ³ | | | TARIFA EN \$ | | | Otros concepto \$ | DEUDA EN \$ | | | Fecha de Pago | |
|---------|-------------------|----------|---------------------------|--------|-----------|--------------|-----------|-------|-------------------|---------------|----------|-------|---------------|-------|
| | Actual | Anterior | Leído en el mes | Básico | Excedente | Cargo fijo | Excedente | Total | | Total del mes | Anterior | Total | | Pagos |
| Enero | | | | | | | | | | | | | | |
| Febrero | | | | | | | | | | | | | | |
| Marzo | | | | | | | | | | | | | | |
| Abril | | | | | | | | | | | | | | |
| Mayo | | | | | | | | | | | | | | |
| Junio | | | | | | | | | | | | | | |

Observaciones:

Junta Administradora del Abastecimiento de Agua Potable

Provincia de

Comunidad

Movimiento de Caja

Correspondiente al mes de de 197..

I. INGRESOS

- Saldo anterior
- Por tarifas del mes
- Por multas y reconexiones
- Por aportes comunitarios
- Por trabajos realizados a particulares
- Para amortización de instalaciones domc.

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| |

TOTAL DE LOS INGRESOS

2. EGRESOS

- Sueldos
- Hipoclorito o cloro gaseoso
- Materiales y mano de obra
- Remite al IEOS para amortización de Inst intradomc.
- Otros gastos administrativos.

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| |
| |

TOTAL DE LOS EGRESOS

- 3. SALDO EN CAJA
- 4. Se remite al IEOS la suma de \$ para amortizar préstamo usuarios para instalaciones domiciliarias

Fecha:

(Firma el Presidente de la Junta) .

(Firma del Tesrero de la Junta).

Junta Administradora del Abastecimiento de Agua Potable

No. _____ Provincia de _____
 Sr. _____ Comunidad _____
 No. de conexión _____ Dirección _____
 Cuenta correspondiente a: _____ de 19 _____
 Consumo desde _____ de _____ a _____ de _____ Páguese antes del _____

| LECTURAS | | CONSUMO EN MES | | | TARIFAS EN S/ | | | Otros Conceptos | DEUDA EN S/ | | |
|----------------------|----------|-------------------|--------|----------|---------------|----------|-------|--------------------|--------------------|----------|-------|
| ACTUAL | Anterior | Consumo al mes | Básico | Exedent. | Cargo fijo | Exedent. | Total | | Total en el mes | Anterior | Total |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Total a Pagar | | | | | | | | | | | |

Válido como comprobante de pago si tiene sello de cancelación.