

PD-ABG-532

SEMI-ANNUAL
SUBSTANTIVE AND ADMINISTRATIVE REPORTS

CONTRACT NO. 520-0339-C-00-2234-00
PROJECT NO. 520-0339

LAPROMED REMODELING
USAID/GUATEMALA

PREPARED BY:

Jacque Holden
Administrative Officer

Program for Appropriate Technology in Health
(PATH)
4 Nickerson
Seattle, WA 98109 USA

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SEMI-ANNUAL REPORT

Immunization and Oral Rehydration Therapy Services for Child Survival Project

USAID/Guatemala Contract No. 520-0339-C-00-2234-00
(October 1992 through March 1993)

INTRODUCTION

Effective October 1, 1992, the Program for Appropriate Technology in Health (PATH) entered into a contract with USAID/Guatemala, Contract No. 520-0339-C-00-2234-00, to complete a local oral rehydration salt (ORS) production plant, LAPROMED, in Guatemala City, Guatemala.

Seven specific objectives were defined by USAID/Guatemala for the project. PATH's implementation of the project is based on those objectives which, for the purpose of this first semi-annual report, are provided below.

- Objective #1 Determine the present availability, distribution, and use of ORS packets in Guatemala.
- Objective #2 Determine conditions and requirements for an effective oral rehydration therapy (ORT) program in Guatemala. Complete a study reporting projected ORS needs and anticipated supply as well as the market for locally produced ORS.
- Objective #3 Assist the University of San Carlos (USAC) in establishing systems and procedures which will enable LAPROMED to function independently of A.I.D. and other donors, similar to a private sector supplier, within one year of the initiation of production.
- Objective #4 Determine specifications for remaining equipment needed to complete LAPROMED machinery-equipment needs. Procure, ship, import, install, and train LAPROMED personnel in the use of equipment detailed in the contract, and coordinate delivery dates, payment terms, and insurance.
- Objective #5 Subcontract a local (Guatemala City) engineering company highly experienced in industrial construction and experienced in sterile or penicillin areas to remodel the area at the USAC to conform to recommendations made by the Head of the Department of Registry and Control of Medicines, Supervision Section of the Ministry of Health.
- Objective #6 Supervise the work performed by the engineering firm and any other subcontractors employed.

Objective #7 Provide to LAPROMED manuals; methods, policies, and procedures; training in standard operating procedures (SOPs); quality control lab validation; equipment installation; plant validation; troubleshooting; quality assurance audit and quality control sampling phase progression; and a marketing and distribution plan.

This semi-annual report, covering the period October 1, 1992, through March 31, 1993, is a combination of two reports required by AIDAR 752-7026. The first, a "substantive" report, covers project implementation status, progress, and plans. The second, an "administrative" report covers project expenditures by contract budget category, personnel employed under the contract, and foreign nationals being trained under the contract. The report sections are:

- SUBSTANTIVE REPORT (Pages 3-10)
- ADMINISTRATIVE REPORT (Pages 11-12)
- ATTACHMENTS

SUBSTANTIVE REPORT

In October 1992, key contract personnel Humberto Zardo (Project Director) and Sara Tifft (Marketing Specialist) carried out a project initiation visit to Guatemala. In accordance with the contract, Section D, "Required Reports," H. Zardo and S. Tifft met with representatives of USAID/Guatemala to discuss a proposed work plan and timeline for project implementation, and to obtain guidance on and provide information as required under the contract, Federal Acquisition Regulations, and A.I.D. Acquisition Regulations.

Critical to this visit was the introduction of the LAPROMED project and PATH's role to Ministry of Health officials; most specifically, Dr. Marco Vinicio Donis, Director, Maternal-Child Health. Dr. Donis stressed the need for strong coordination between the different international donors and the two USAID/Guatemala-funded programs (that of PATH's and Clapp & Mayne's), referred to by the overall program name of PAI-TRO (EPI-ORT), and advised of an interagency commission formed to oversee the PAI-TRO activities. Establishment of formal communication channels with Dr. Donis was also discussed, and it was agreed that during each visit to Guatemala, a PATH representative would meet with him (or his designee), as well as representatives of LAPROMED, USAC, and USAID/Guatemala.

H. Zardo and S. Tifft also met with officials of UNICEF, LAPROMED, University of San Carlos (USAC), and Arquitectos Pelayo Llarena & Colaboradores. Details regarding the activities carried out during this first visit can be found in the two separate trip reports prepared by H. Zardo and S. Tifft and submitted to USAID/Guatemala in November 1992 and December 1992, respectively.

Objective #1

- Quantitative

During the reporting period, PATH procured and received from IMS/Asserta/Guatemala data on the commercial sales and value of oral electrolyte replacers and certain antidiarrheals from 1990 through 1992. Data regarding oral electrolyte replacer sales in 1993 will also be obtained from IMS/Asserta.

For the purpose of analyzing private sector distribution capabilities, PATH developed questionnaires for and conducted interviews with representatives of pharmaceutical firms that either manufacture or import and distribute ORS in Guatemala. The pharmaceutical firms interviewed were identified through IMS/Asserta data and industry contacts in Guatemala. The interviews were conducted by Fletcher Catron in November 1992. A summary of the primary conclusions resulting from the interviews, as well as a listing of ORS products available in Guatemala, is provided as Attachment A. Details regarding the individual interviews can be

obtained in the trip report prepared by F. Catron and submitted to USAID/Guatemala in December 1992.

Additional commercial distribution data will be requested from IMS/Asserta. The data will indicate the number of pharmacies audited in the Asserta/Guatemala sample and the pharmacies' distribution in urban versus rural areas.

Information regarding the nongovernmental organization (NGO) segment of the public sector ORS distribution system was gathered by F. Catron in February 1993. Thirteen major NGOs were contacted to determine which groups purchased and distributed ORS, and to gather information regarding their ORS procurement history, practices, and plans for the future. A list of NGOs in the health sector provided by ASINDES (an association of NGOs in Guatemala) formed the basis for the NGO interviews conducted. Also included in these interviews were national agencies involved in ORS procurement or distribution such as INCAP, the Droguería Nacional, IGSS, and the Army. Before conducting the interviews, the NGO questionnaire developed by PATH was reviewed with representatives Drs. Donis, Sajché, and Morán of the Ministry of Health, and their input was obtained and incorporated. A summary of and preliminary recommendations resulting from the NGO interviews is provided as Attachment B. Details regarding the individual interviews can be obtained in the trip report prepared by F. Catron and submitted to USAID/Guatemala in April 1993.

During a December visit with Drs. Donis and Sajché, Dr. Donis advised that he believes the two principal problems with the ORT program requiring priority attention are distribution of ORS and limited use of ORS. Penetration of the ORT program in indigenous areas of the country was also considered a problem. Because the Ministry of Health recognizes its coverage will likely not exceed 30 percent of the population, it is seeking to expand coverage by working more closely with other entities, especially NGOs. This will be the essence of its multisectoral approach to providing health services.

During the next quarter, PATH will analyze and consolidate the data obtained from IMS/Asserta/Guatemala and the public and private sector ORS availability, use, and distribution information gathered from the NGOs, the Ministry of Health, and the private sector. PATH will develop a report concerning availability of ORS and related products and a market profile to estimate total market size and the projected need and demand for ORS.

- Qualitative

In October 1992, S. Tifft identified and prescreened in Guatemala three firms, Interamerican Development Advisory Services, Ltd. (IDEAS), Generis Latina, and INCAP, to determine their qualifications as potential candidates to carry out qualitative

research on PATH's behalf in Guatemala. An Invitation to Bid was issued to the three firms and, based on the responses, IDEAS was awarded the contract. A copy of the technical services agreement issued to IDEAS by PATH was submitted to USAID/Guatemala Contracts as required.

The objectives and methodology for the qualitative research were reviewed with USAID/Guatemala and Drs. Donis, Sajché, and Morán prior to its start up. During a meeting with the Ministry of Health representatives, it was agreed that a Ministry Area or District maternal-child health representative would accompany the field workers as the research was carried out so as to allow a Ministry of Health person to learn the research techniques and obtain immediate feedback on the research results. To make the research findings most useful to Area and District personnel, it was also agreed that a "rapid assessment" mechanism would be established to provide early, short reviews of field results to the Ministry of Health at the central level and to the Areas/Districts where the research was conducted. Dr. Donis agreed to send a letter to officially introduce the IDEAS research teams to the Ministry of Health officials in the areas where the research was to be conducted.

Beginning March 1, 1993, after initial interviewer and facilitator training, field work was carried out for four weeks in seven regions, reaching urban, peri-urban, and rural areas in each of the regions. As of the end of the reporting period, IDEAS completed all field work was completed and began analysis of the data gathered, in accordance with the Data Analysis Plan submitted to and approved by PATH. During the next reporting period it is anticipated that IDEAS will submit to PATH a preliminary report on packaging material preferences obtained through focus group discussions. A final report on the qualitative research will be completed and the findings presented to USAID/Guatemala and the Ministry of Health.

Objective #2

During December 1992 and February 1993 visits, S. Tiffit and F. Catron collected information concerning ORS inventories available and quantities distributed by the Ministry of Health. This information was obtained through interviews with Drs. Donis and Sajché and their staff and Dr. Jorge Chang of USAID/Guatemala; by reviewing ORT program reports submitted to the Ministry of Health by the 24 health districts; by interviewing the Director and Sub-Director of the National Cholera Program; by personal inspection of the two warehouses containing central ORS supplies; and by reviewing ORS inventory control sheets. Results of this research are contained in the detailed trip reports of S. Tiffit and F. Catron for the December 1992 and February 1993 trips, respectively.

To augment the public sector inventory assessments, IDEAS field interviewers were requested to complete audit forms indicating the approximate amount and "brand" of ORS (i.e., UNICEF, USAID/ Guatemala, or commercial) available at each outlet visited (e.g., health centers,

health posts, or pharmacies). To supplement information gathered regarding private sector availability of ORS, IDEAS' field interviewers visited local pharmacies/shops, prior to conducting their interviews and focus groups, to determine what ORT products were available.

It is anticipated that during the next reporting period, the information above along with that of Objective #1 will be consolidated to provide recommendations regarding an effective ORT program, and to complete the study reporting projected ORS needs and anticipated supply and demand for locally produced ORS.

Objective #3

In October 1992 initial discussions were held with LAPROMED, USAC, and the Ministry of Health regarding LAPROMED's need to establish a five-year plan for sustainability. The discussions also stressed the critical need for the development and implementation of a mechanism among LAPROMED, the Ministry of Health, and the USAC for orders, payment, and project management before delivery of sachets begins.

To assist LAPROMED in achieving sustainable operations for the production and quality control of its ORS product, arrangements have begun for consultant James J. Griffith to work with H. Zardo to develop a training system for all LAPROMED supervisors and leads. It is anticipated that during the next reporting period, the training system will be developed and on-site training on the systems and its implementation will be provided by J. Griffith to LAPROMED staff.

In October 1992 staff obtained and began reviewing the 1986 and 1991 amendment of the technical cooperation agreement between the Ministry of Health and USAC (LAPROMED). Cash flow will be a critical factor for LAPROMED to achieve the goal of becoming a sustainable operation. Most specifically, LAPROMED must have a ready cash flow to cover such operational costs, mainly workers (not management) salaries and utilities (electricity, water, gas, etc.). A key factor in the agreement is the Ministry of Health's commitment to purchase LAPROMED's ORS, which the Ministry of Health must provide reasonably in advance of LAPROMED's start-up of production. Dr. Patricia O'Connor, USAID/Guatemala, advised that the funds for the purchase of ORS are to be from the Government of Guatemala, not the Mission. These funds come from the national budget (fiscal year January through December) prepared by the Ministry of Finance, who will then make the funds available to the Ministry of Health. She advised that while the budget may be approved by the end in December, funds may not be available to the Ministry of Health until March or later, which means LAPROMED would receive funds even later yet. During the upcoming reporting period, PATH will work with the Ministry of Health to secure its commitment to purchase ORS from LAPROMED and, in turn, the Ministry of Finance's commitment to provide funds in the national budget for the purchase of ORS. Further, staff will work with key parties at LAPROMED, USAC, and the Ministry of Health to establish a payment mechanism to LAPROMED so that an adequately funded cash flow system will be available for

LAPROMED's procurement of materials and payment of staff salaries and other production costs such as electricity. To facilitate these discussions, it is anticipated that PATH will develop with LAPROMED a cost analysis and projected plans for demand, production, and procurement. Discussions will also be held with FUNDAC, a foundation within USAC, to determine if the Foundation will be able to administer LAPROMED's funds, purchases, etc.

Objective #4

During the initial project visit in October 1992, H. Zardo discussed with LAPROMED the original list of equipment to be procured for production and quality control. (The original list was prepared in May 1991 with Lic. Pedro Noriega, Head of Quality Control; Licda. Alba Nori de Barrera, Head of Industrial Pharmacy; and Lic. Estuardo Serrano, Head of Production.) LAPROMED provided to H. Zardo a list divided into what LAPROMED considered essential and secondary items. The list included items not on the original list, and was comprised mostly of quality control equipment. LAPROMED staff explained to H. Zardo that the new/additional quality control items were now required because (1) after Lic. Noriega passed away, some of the quality control equipment was moved out of the LAPROMED facility and into other locations in the University, such as the Department of Chemistry; and (2) some of the quality control equipment had become obsolete. With regard to the new/additional production equipment, LAPROMED explained that the original implementation plan for ORS production was changed to minimize the number of analysts involved in the process, as less student participants were anticipated. This change in the plan also provided the additional benefit of helping to reduce overall costs.

LAPROMED was advised that items on their secondary list would be considered pending performance of the existing equipment, availability of funds, and approval by USAID/Guatemala. LAPROMED was requested to provide a list of reagents and glassware necessary to conduct 20 assays simultaneously using specified methods, as well as price quotations from local vendors on the reagents and production equipment for price comparison purposes. This information was provided by Lic. Gálvez in December 1992.

Throughout the reporting period PATH procurement staff have been developing technical specifications for and obtaining quotations from vendors on the production and quality control equipment currently approved for purchase under the contract. Where appropriate because of dollar value, Invitations to Bid have been issued.

All approved items are anticipated to be procured and received in Guatemala during the next reporting period in preparation for production start up in September 1993. (All quality control equipment will be received in Seattle for initial inspection by PATH prior to shipment to Guatemala.)

It is anticipated that a request for approval of new/additional equipment, including estimated equipment and labor costs, will be provided to the USAID/Guatemala Contracts Office early in the next reporting period.

Objective #5

In December 1992, PATH entered into a General Construction/Construction Management contract with Arquitecto Pelayo Llarena, Sr., (referred to as APLC) for the purpose of securing the services of an architectural engineer to carry out and manage the remodeling work to be completed at the LAPROMED facility. Under the contract, Arq. Pelayo Llarena is responsible for supervising and coordinating the work of the subcontractors in accordance with the Technical Specifications and Quantifications and Costs provided as well as within anticipated timeframes. A copy of the contract was submitted to USAID/Guatemala Contracts as required.

Objective #6

Remodeling/construction work at the LAPROMED facility began on January 18, 1993, under the supervision and coordination of Arq. Pelayo Llarena. H. Zardo has provided overall supervision and oversight of the work being done at the LAPROMED facility. Lic. Gálvez, Head of the ORS Department at LAPROMED, is also overseeing the activities of APLC and its subcontractors on a daily basis. Reports are prepared and signed by LAPROMED and APLC, copies of which are provided to PATH and USAID/Guatemala. To date, three progress reports have been submitted by APLC and are provided as Attachment C to this report.

In response to a request by USAID/Guatemala, the construction site was inspected by Servicios Generales (SG) of USAC on March 2, 1993, for the purpose of monitoring adherence of the remodeling to the specifications provided by PATH.

Anticipated inspections of the LAPROMED facility will include the following:

- The Ministry of Health will inspect LAPROMED when all equipment is on-site before final installation so as to avoid changes after installation is completed.
- Visits by Servicios Generales of USAC are anticipated, some should coincide with the USAC Rector and Dean of the School of Pharmacy for the purpose of ensuring the work is completed on schedule and with the best quality.
- The Institute of Anthropology and History (IDAEH) may visit the site at anytime. However, IDAEH will be requested to visit the site after work has been completed on the windows, doors, and floors in order to provide assurances that the work was done adhering to the plans for the remodeling of a historic building.

Since the initiation of the construction work, several unanticipated issues have been found which have increased either or both cost or labor output. These issues include:

- The outside windows from the first (production) and second (quality control) floors were found to be loosely fixed and requiring major repairs before the internal walls could be placed. This damage, not evident at the time of APLC's initial estimation, resulted from rain and wind forces and requires that the windows be better fixed to the walls and sealed to prevent leakage.
- The original tiles of the quality control laboratory area were damaged as a result of improper work done to bury electric conduits and install quality control benches, as well as the storage of construction materials without pallets. The damage requires that the floor be covered with vinyl tile after the existing floor is cleaned and smoothed.
- Drinking water PVC pipelines were found under the "historic" floor of the warehouse and required rerouting of the line through the corridor.
- When the "historic" floor was removed at the facility, loose soil (cavities) was found and was determined to have either been caused by leaking sewage pipes or from the initial construction work done at the facility. To prepare the facility for industrial use, APLC was required to restore the sewage and water drainage and fill the cavities with adequate materials to provide proper compactation to support the industrial flooring.

An amendment to the existing contract with APLC was completed in March 1993 (a copy of which was submitted to USAID/Guatemala) to incorporate changes to the Specifications and Quantifications for the unanticipated window and door work. Because of unanticipated savings from modifications to the suspended ceiling, the additional costs resulting from the windows were offset. Thus, total construction cost estimates do not exceed the original estimate at this time.

An additional amendment is anticipated during the next reporting period to incorporate changes to the Specifications and Quantifications for the quality control vinyl floor.

As of early March 1993, the construction work is on schedule (see Attachment D, a timeline prepared by APLC indicating status of the construction work against the projected timelines). It is anticipated that the construction work will be ongoing through the next reporting period and that PATH will provide both on-site and Seattle-based supervision and guidance to APLC and its subcontractors.

Objective #7

In October 1992 H. Zardo initiated work with the LAPROMED staff on the introduction and implementation of production, quality control, and quality assurance systems and procedures. With the assistance of PATH, LAPROMED will review manuals developed by PATH and translate and adapt them to their own manuals and needs. Work with LAPROMED in this area will continue throughout the project.

A first draft of job descriptions has been developed by LAPROMED and reviewed by PATH. A training program will be developed using the job descriptions. PATH will assist LAPROMED in developing a hiring plan for key operations and quality control staff, the actual hiring of which is anticipated to begin during the next quarter.

It is anticipated that work on this objective will continue throughout the next reporting period. Work will also begin with LAPROMED to cover such issues as standard operating procedures, laboratory validation, equipment installation, and plant validation.

ADMINISTRATIVE REPORT

Expenditures

Cumulative project expenditures during the report period total \$386,994 (\$383,162 expenditures plus \$3,831 fixed fee). Attachment E is a summary expenditure report providing a breakdown of expenditures against budgets for each contract budget category. An explanation of expenditures by each contract budget category is provided below:

- Salaries

Expenditures in this budget category total \$75,293. The expenditures reflect salaries and staff leave incurred for the professional staff only included in PATH's proposal and/or specifically approved by USAID/Guatemala and administrative support staff.

- Fringe

Expenditures in this budget category total \$22,141. The expenditures reflect fringe benefits based on a percentage (29.5 percent) of the total salary and staff leave incurred during the reporting period.

- Consultants

Expenditures in this budget category total \$1,920. The expenditures reflect fees for Stephen Fay's work in January/February 1993 as a result of his visit to Guatemala with Humberto Zardo and Jasbir Dhanjal to observe construction progress and review demolition findings, review requirements for the air conditioning, and provide finishing details for the floor and ceiling based on currently available materials.

- Travel and Transportation

Expenditures in this budget category total \$25,050. The expenditures reflect airfare, per diem, and miscellaneous expenses associated with travel to Guatemala to carry out project work. Attachment F provides a summary of travel during the reporting period.

- Other Direct Costs

Expenditures in this budget category total \$25,571. The expenditures reflect other direct costs to the project such as copying, telephone, fax, express mail, postage, etc. Also included in this budget category is the "facilities" allocation, based on full salary (salary, staff leave, and fringe) incurred during the reporting period.

- Equipment and Materials

No expenditures have been incurred to date for the purchase of equipment or materials.

- Subcontracts

Expenditures in this budget category total \$137,013. The expenditures reflect payments as follows: APLC (\$108,700); IDEAS (\$21,936); IMS/Asserta (\$4,000); and attorney services (\$2,377).

- G & A

Expenditures in this budget category total \$96,171. The expenditures reflect an indirect cost based on a 33.9 percent of direct project costs.

- Fixed fee

Expenditures in this budget category total \$3,831. The fee is based on one percent of total project expenditures.

Personnel Employed

Personnel employed during the reporting period consisted of the professional staff only included in PATH's proposal and/or specifically approved by USAID/Guatemala and administrative support staff.

Foreign Nationals

No foreign nationals were trained under the contract during the reporting period.

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ATTACHMENT A

Summary of Interviews with Pharmaceutical Firms
and
Guatemala ORS Product Listing

Summary of Interviews with Pharmaceutical Firms

After having administered questionnaires to seven private sector oral rehydration product manufacture/distribution companies, the following are the primary conclusions that resulted from those interviews:

1. There is a very healthy, established market in Guatemala for rehydration products with a variety of quality products in all forms, flavors, and packages. (See Attachment B.)
2. Private companies welcome the LAPROMED project, especially if it will help decrease the large product "dump" effect that results from periodic big shipments of free product. All of the companies see this "dump" as very disruptive to stable market forces.
3. Promotional material to raise overall demand for rehydration products should have a heavy educational component on diarrheal disease and represent all types of rehydration products, not simply salts in sachet form. All promotional and educational efforts should be done in as many indigenous languages as possible.
4. Cholera education has done more for diarrheal disease education/awareness than any other program having to do with the use of rehydration products. This is a technique to emulate, in particular the highly respected advertisements and awareness campaigns.
5. All the ORS manufacturers/distributors say that the bulk of their sales are outside the capital city, principally in the coastal areas; other rural areas are also important. The manufacturers/distributors are clear that rural areas have a high degree of diarrheal disease prevalence.
6. Several but not all companies mentioned that education efforts should be directed to pharmacists and physicians concerning the PAHO ban on antidiarrheal use as well as limited use of antibiotics. While there was general agreement that this has improved recently, there are still unwarranted prescriptions of these drugs for diarrheal disease.
7. All those interviewed mentioned a particular interest in ensuring that the LAPROMED project avoid any leakage into private sector outlets. All insisted that the product be clearly marked, "Public Sector Product - SALE PROHIBITED." In addition to clear and legible product markings, many asked pointedly whether the project would include a component by which routine monitoring would be conducted to ensure compliance and stop potential leakage. Most seemed skeptical of the MOH's ability to accomplish this important work.

8. Most manufacturers also mentioned that the two biggest obstacles to correct product use for powdered presentations was mixing the product with dirty water and subsequently boiling the solution. Clear directions for low-literate audiences should reinforce the discouragement of these practices.
9. Many respondents expressed an interest in improved distribution to rural health centers. It seems to be a common perception that leakage to private sector outlets and product hoarding occur at central warehouses and distribution depots.
10. One manufacturer mentioned that he felt the effort PATH was engaged in would only have lasting value if it is combined with a serious eradication program. As an example, he cited the success of the malaria eradication program and suggested that we model eradication efforts after the explicit education that was done in that campaign.
11. Manufacturers mentioned pressure to collaborate with WHO formula recommendations. On the other hand, they hope that, given the wide spectrum of other formulations and flavors, education efforts will mention the variety of products available and will suggest that consumers seek their pharmacist's advice for the appropriate product. They hope the WHO formula is not solely promoted. All the respondents felt that colored/flavored products also have merit and do not result in over-consumption.
12. There was uniform interest in affecting government regulations on the differences between ethical and over-the-counter (OTC) products. Most felt that regulations were too lenient, resulting in general product misuse of rehydration products or otherwise.
13. Many companies mentioned that they were eager for new technologies in rehydration solutions. It is possible that if they had more access to data, manufacturers would be interested in rice-based formulas.
14. Manufacturers routinely mentioned that the biggest factor to influence consumption of these products was government education, not regulation (such as banning antidiarrheal products). The clear message was EDUCATION rather than LEGISLATION to ensure proper treatment of diarrheal disease.

Finally, many manufacturers were aware of the history of the LAPROMED project. Almost all mentioned their sincere hope that this project would not result in misuse of funds which has plagued so many government projects.

Each interviewee was told that PATH has only recently been involved in the LAPROMED project, and that USAID/Guatemala has taken many steps to tighten financial responsibility on this and other projects.

Guatemala ORS Product Listing

Note: This list augments Dr. Hans Faust's ORT product listing (see page B-3) as detailed in his trip report of July 2-4, 1992. The products missing from this product listing are Servidrat, by Ciba Geigy, and the product manufactured by UNIPHARM.

PRODUCT	VOLUME	FLAVOR	COLOR	PRICE*	MANUFACTURER	FORMULA
Glucosoral	1000 ml	Y	N	Q1.40	Quifarma, S.A.	3.5 g Sodium; 1.5 g Potassium; 2.9 g Trisodium Citrate; 20.0 g Anhydrous Dextrose; Flavor. Also available in 500 ml and one-liter bottled solution. See H. Faust ORT product classification for ingredients. Samples in box at DataPro. Price for two half-liter bottles (packaged together) Q11.00.
Pedialyte	400 ml	Y	Y	Q7.89	Abbott, S.A.	48 mg Sodium; 596 mg Potassium; 116 mg Calcium; 164 mg Magnesium; 1256 mg Sodium Lactate; 20 g Dextrose; de-ionized water.
Litrosal	1000 ml	N	N	Q1.69	Adamed, S.A.	Per sachet - 20.0 g Glucose Anhydrous; 3.5 g Sodium Chloride; 2.9 g Trisodium Citrate Dihydrate; 1.5 g Potassium Chloride.
Suero Oral	250 ml	N	N	Q0.35-0.50	Ancalmo, S.A., (manufac. in El Salvador)	Per sachet - 0.48 g Glucose Anhydrous; 0.48 g Sodium Chloride; 0.18 g Potassium Chloride; 0.096 g Calcium Gluconate.
Hidradex Oral	1000 ml	Y	Y	Q1.50	Bertel, S.A.	20 g Dextrose; 3.5 g Sodium Chloride; 1.5 g Potassium Chloride; 2.9 g Trisodium Citrate. ("WHO Formula" on label).

* Price to consumers

PRODUCT	VOLUME	FLAVOR	COLOR	PRICE*	MANUFACTURER	FORMULA
Hidafix	250 ml	?	?	----	Rorer, S.A., Discontinued	154.2 mg Calcium Lactate; 117.3 mg Magnesium Citrate; 545.5 mg Potassium Citrate; 877.5 mg Sodium Chloride; 3,125.0 mg Fructose; 3,125.0 mg Glucose. This product comes in a foil packet and is a concentrate pre-mix formula which is dissolved in 250 ml water and then administered. It was only on the market for a short time and recently discontinued.
Oraelectril	1000 ml	?	Y	?	Finlay, S.A. (manufac. in Honduras)	Per 100 cc - 2.0 g Dextrose; 93.5 mg Sodium Chloride; 119 mg Potassium Chloride, 36.8 mg Calcium Chloride; 30.5 mg Magnesium Chloride; and distilled water. This is a "popular" solution for moderate cases of dehydration.
Litodex	1000 ml	N	Y	?	Finlay, S.A. (manufac. in Honduras)	Per liter - 3.5 g Sodium Chloride; 5.56 g Sodium Lactate; 1.5 g Potassium Chloride; 20 g Dextrose. This product is intended for serious cases of dehydration.
Electoral	500 ml	N	Y	Q6.11	Bonin, S.A.	Per 100 ml - 15 mg Sodium Chloride; 150 mg Potassium Chloride; 30 mg Calcium Chloride; 40 mg Magnesium Chloride; 310 mg Sodium Lactate; 5 g Dextrose Monohydrate; and distilled water.

* Price to consumers

TRADENAME, COMPOSITION AND MANUFACTURER OF ORS PRODUCTS *

Country	TradeName	Volume ml. Flavour ** Colour	Electrolyte conc. mEq/L *** ****							Manufacturer	
			Y	N	Na	K	Cl	Cit	HCO3		
											90
Guatemala	GLUCOSORAL	1000	Y	N	90	20	80	0	10	111	Laboratórios Quiifarma S.A.
	GLUCOSORAL	500	N	N	15	10	15	0	0	278	Laboratorios Quiifarma S.A.
	GLUCOSORAL OQMOS	500	N	N	75	20	65	0	80	111	Laboratorios Quiifarma S.A.
	LITROSAL	1000	N	N	90	20	80	0	10	111	ADAMED Pharmaceuticals S.A.
	PEDIALYTE	400	N	N	30	20	30	0	0	278	ABBOTT Laboratórios S.A.
	PEDIALYTE RS	400	N	N	75	20	65	0	30	139	ABBOTT Laboratories S.A.
	RESORAL-AR	500	N	N	90	20	80	0	10	0	UNIPHARM S.A.
	SUERO DIETA ELECTR	0			***	**	**	**	**	***	Laboratórios LAFRIN S.A.
	SUPERSUERO	1000	N	N	90	20	80	0	10	111	LAPROMED

* This list is derived from the WHO CDD Database. At this stage the list is incomplete and contains some products that may no longer be manufactured. It will be refined and updated.
 ** Volume of solution to be made from one pack of ORS product.
 *** 0 indicates that the product is known to contain none of that ingredient. A blank space indicates that either the presence or the quantity of that ingredient is not known.
 **** Figures rounded to nearest whole number
 ** = not known

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ATTACHMENT B
Summary of NGO Interview Findings
and
Preliminary Recommendations

Summary of NGO Interview Findings and Preliminary Recommendations for ORS Distribution Improvements in Guatemala

1. Yearly regional (and perhaps central) meetings should be conducted between the NGOs and the MOH to coordinate ORS/ORT activities. This will allow both groups to better dedicate resources where they are needed and not duplicate distribution and health service efforts.
2. The Droguería Nacional is an underutilized distribution network. Specific resources should be dedicated to allow the Droguería Nacional to carry donated or purchased ORS at a subsidized price to their outlets. In addition, resources should be provided to help meet transportation needs. The Droguería Nacional provides drugs to national pharmacies, health centers and posts as well as NGOs. Currently, they do not have funds to purchase ORS at the specific order of the Vice Minister of Health, because there is an abundance of donated ORS.
3. UNICEF and ASINDES should collaborate with Dr. Rafael Flores' investigation to design uniform forms for ORS need calculations, diarrheal disease case management, and requisitions. The NGOs that request MOH ORS should follow the same requisition procedures as those that request UNICEF ORS. Quarterly coordination meetings should verify information in Recommendation #1.
4. If UNICEF wants to continue alternative distribution experiments, the ORS distributed should clearly state that the product should not be sold for more than the subsidized price.
5. Any recommendation for the improvement of ORS/ORT program in Guatemala must include some detailed plans for improved ORS distribution through the MOH or NGOs. Currently, the MOH's constrained resources cannot meet the demand for rural health centers and posts for ORS delivery. Use of Pepsi (or another commercial entity) as a distribution mechanism might be an alternative.
6. Serious efforts should center on investigating alternative distribution channels. This might take the form of identifying those areas which are poorly served and requesting assistance from Pepsi or other commercial product distributors to complete monthly deliveries of this and/or other essential supplies.
7. ASINDES should develop a tracking system for which NGOs are delivering what quantity ORS to which areas and make sure that LAPROMED has an annual estimation of their needs, including seasonal variations. This figure should become part of LAPROMED's annual production forecasts. One of the primary comments by NGOs was that

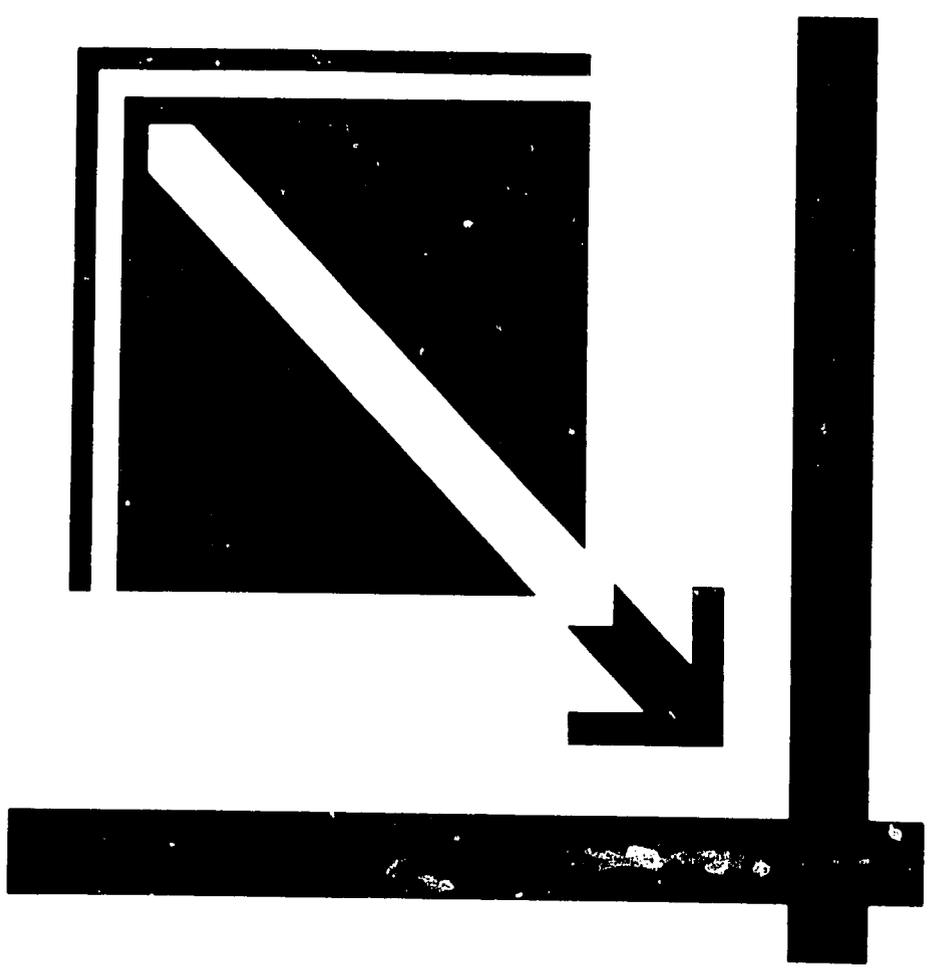
they often do not receive all the ORS they requested from UNICEF. Improved distribution by these groups will lessen the burden on the MOH, allowing the MOH to concentrate resources in areas not as well served by NGOs.

8. It should be clarified to LAPROMED that their NGO "clientele" is made up of UNICEF (who will pay for the product), ASINDES (who will supervise distribution of the product to NGOs), and the NGOs themselves who will distribute the ORS. They need to have a system that allows them to be sensitive to their multiple client needs.

ATTACHMENT C
Construction Progress Reports
January-March 1993

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PATH / AID LAPROMED



JANUARY 1993

arquitectos Belayo Illarena
& colaboradores
arquitectos e ingenieros

2a avenida n° 9-76 zona 1. guatemala, c a tel 20647

L A P R O M E D
BRIEF CONTRACT HISTORY.

On April 5-1991, Mr. Stephen Fay called Arquitectos Pelayo Llarena & colaboradores to tell them that Mr. Humberto Zardo of PATH would be coming to Guatemala on a special assignment to interview professionals that have designed and built Pharmaceutical Plants in Guatemala.

On April 26-1991, Mr. Humberto Zardo called Architects Pelayo Llarena and was given a Brochure of the work of the Company specifically about Pharmaceutical Plants, Laboratories for Universities and allied subjects.

On April 29-1991 we met with Mr. Steve Fay and Mr. Humberto Zardo who told us that AID wanted to design and remodel the existing production plant for oral rehydration salts (ORS) in the School of Pharmacy Building (LAPROMED) of the University of San Carlos of Guatemala located at 7a. Avenida and 3a. Calle of zone 1, Guatemala City.

On May 3-1991 we gave Mr. Zardo and Mr. Fay the preliminary design of the plant.

On December 12-1991 we were asked by PATH to do the Design and on February 26-1992 we delivered to Path the Plans, Specifications, Quantification and Cost Estimate and the Chronogram of the Construction.

On June 23, Mr. Humberto Zardo called and asked us to actualize the Cost Estimate and the Chronogram.

On June 26 the information requested by PATH was delivered via DHL.

On October 21-1992 we had a meeting with Mr. Zardo and representatives of the Universidad de San Carlos, of "Servicios Generales". At this meeting it was explained to "Servicios Generales" the Plans and Specifications. They mentioned that the Plans should be approved by "Antropología e Historia", a division of the Ministry of "Cultura y Deportes".

In the interim, the officials of LAPROMED got the approval of the Plans and Specs. from the Ministry of "Salud Pública y Asistencia Social".

On December 9, 1992 a Contract between the Architect Pelayo Llarena Sr. and PATH was signed to remodel the existing production plant of ORS.

On December 18, 1992 Ref. 911-92, "Antropología e Historia" approved the Plans for the remodeling of ORS area.

On January 14th. by means of a FAX we received authorization by PATH to begin the construction starting the 18th. of January 1993. This authorization, signed by Mr. Eric G. Walker, Vice President, Finance and Mr. Humberto Zardo, Technical Director.

January 18, 1993

Today we started the Construction. Lic. Luis Gálvez and Lic. Víctor Rodríguez were at the premises, they showed me that one of the windows was blown away by a little wind that we had in November. The window allong with the glass is broken.

Lic. Gálvez has not moved the machinery from where they are standing now to a new location where they will not interere with the work we have to do. We will remove this obstacles in order to proceed with the construction.

Another thing that we are doing is taking appart the old Lab. tables, they are coming appart because they are full of live termites. I asked Lic. Gálvez where to put every thing that we are removing and he said to place them in the "Patio" and from there they will take care of it.

We are removing the old floor in accordance with the recomendations of "An-tropología e Historia", it is taking some time, I believe we might save from 30% to 40%.

I took some pictures for the monthly Report.

January 19, 1993

At 8:50 A.M. I received a call from Lic. Alvaro Castellanos saying that they have the Spanish version of our Contrct. I told him to send it over.

We are doing the moving of the machines because at LAPROMED they did'nt have any body to do it. Lic. Gálvez has taken over as the representative of LAPRO-MED and is telling us where to place the machines and the left overs of the floors. The machines will be located in the corridors and the floor tiles of the the tile floor will be taken to the roof of the building..

Since LAPROMED does not work on Saturday, we asked the workers if they minded to work an extra hour a day to compensate for not working on Saturday and they were more than happy to do so.

In removing the old floor we made a hole in the water main that is one inch below the finish floor. It was repaired immediately.

January 20, 1993

We started opening the door to 3a. Calle. The window that was located in this opening will be used where the wind threw away another window. I asked Lic. Gálvez if there were any leakings in the windows and he said that there were many. We will have to seal the windows before we place the other walls in front of the windows. I had no idea that they were in such a bad shape because not long ago they were repaired. This is an unexpected surprise.

January 21, 1993

The door to 3a. Calle is almost open. We started bringing down the furniture in the area of Q.C. If we don't do it, nobody will. The wooden ceiling and the plastic over it, is being taken down. Lic. Gálvez gave me an "Acta" where he mentions what we are doing and what LAPROMED is receiving from us, like materials that are being dismantled.

At 5:30 PM. I got a call from PATH wanting to know if we had started the work in time. I told them that we started on the 18th. and progressing according to the cronogram. It was a short call.

January 22, 1993

We are still moving the Lab. Tables in the second floor where the QC. is being located. We had to use some scaffolds because they don't go through the existing doors nor the stairs to bring them down to the Patio on the first floor.

The Tile floor in the second floor, now that we had removed the lab. tables, is in bad shape. We did not make provisions to substitute this floor, we only envisioned to clean it up.

January 25, 1993

We met at LAPROMED with Humberto Zardo, Ms. Carolina de Godínez and Mr. Jasbir Dhanjal. I gave them a tour of the premises and showed them the work that we are doing.

In the afternoon we got most of the debris out into a truck using the newly opened door to the street.

Humberto told me that Steve Fay would be arriving tomorrow.

January 26, 1993

Around 8:00 AM. Humberto Zardo called and said that Steve Fay was in Guatemala, to meet them at LAPROMED at 9:30 AM.

We met at the site and discussed some of the things that "Servicios Generales" of USAC should have done but didn't, like fixing the windows that were blown away, etc.

At 3:00 PM. we met at Humberto's Zardo Hotel room to review what we had discussed in the morning. Present: Humberto Zardo, Jasbir Dhanjal, Steve Fay and Pelayo Llarena Sr.

Arquitecto Pelayo Llarena Sr. was given the following directives:

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- 1.- Increase the height of room 309 from 3.00 mts. to about 4.00 mts.
- 2.- Diminish the height of room 200 from 3.60 mts. to 3.20 mts.
- 3.- Make a ramp to the new door of 3a. Calle and slope the sidewalk like a car entrance.
- 4.- Use Gipsun board for the suspended ceiling instead of the mechanical suspension and "Plycem" as specified in the Plans and Specs.
Paint the Gipsun board with epoxy paint the ceiling in the first floor and use latex paint in the second floor.
- 5.- Paint the Doors with different colors in accordance to the cleanliness level.
- 6.- In rooms 404 and 405 where the windows are located, make the height of the walls at 2.10 mts. these walls are located in Axis C and D and on A+ or B-.
- 7.- In the QC Lab. we are to cover the old floor with vinyl tile. This is a new item.
- 8.- The Windows should be: screwed, calked and made them tight.

January 27, 1993.

In the afternoon we had a meeting with Humberto Zardo and the Subcontractor of the electrical work. After a series of questions and answers, Humberto arrived at the conclusion that it was not worth it to try to buy the few things that we need from the US by PATH.

Later on I took him to meet the Subcontractor of the Metal Roof.

January 28, 1993

In the morning I went to supervise the construction and found out that the metal ceiling that we were to dismount very carefully had collapsed. The previous contractor when he placed back the ceiling, he forgot to anchor it to the walls and trusses. Lic. Gálvez was present when we started to dismount the ceiling. The comments of Lic. Gálvez and Lic. Rodríguez were that it was a good thing that we are doing the remodeling because if we had not started this phase of the work, the ceiling was bound to drop, with a little tremor, and might have caused a mishap.

In the afternoon at 2:00 PM., the Director of AID Mr. Terrence J. Brown, the Head of Education and Health Mr. Gary Cook, the Manager of Health and Education Ms. Patricia O'Connors, Mr. Humberto Zardo, Mr. Steve Fay, the Dean of the School of Pharmacy, Lic. Rodríguez, Lic. Gálvez and I met at LAPROMED. Mr. Zardo explained to the AID representatives what we are doing and then we gave them a tour and explained what we had encountered and the solutions that we are giving to such problems. Specifically the floor on the QC. Lab. that will require a new floor. We feel that a Vinyl tile on top of the old floor will do the trick at a low price.

After the meeting we came to our office, Humberto Zardo, Steve Fay and I. I had previously made an appointment with the Subs. of the Air Conditioning and of the Suspended Ceiling. Mr. Fay concurred with Mr. Zardo that we should change the Mechanical Suspension for a ceiling made of Gypsum board over metal rails. We asked the Representative of the Suspended Ceiling to quote this new modality.

To the Air Conditioning representative, Mr. Fay told him that we might change the two units for one, but that the ducts would not be changed. This change had to be done in order to comply with the requirements of Arq. Velásquez of Antropología e Historia so the Roof that will cover the equipment would be less noticeably.

January 29, 1993

We went with Humberto to meet the Subcontractor for the doors to find out if he

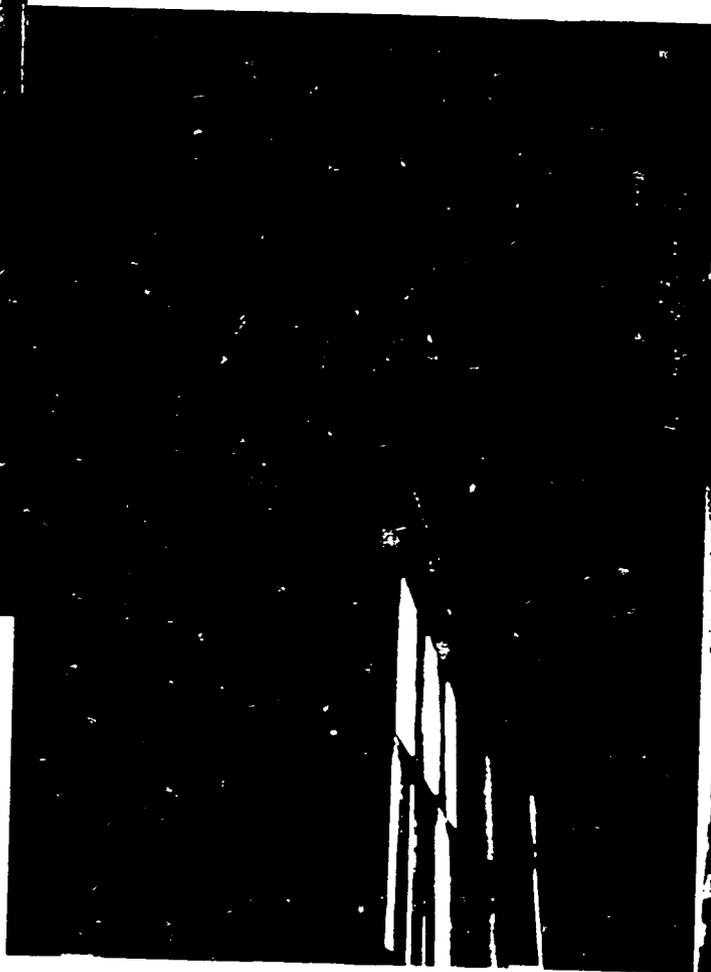
could fix the windows that were never fixed by Servicios Generales of USAC. On Monday at 3:30 PM. we are to meet at LAPROMED. Today is another Holyday for USAC. It is a good thing that we opened the door to the street when we did.

18 FNE. 1993

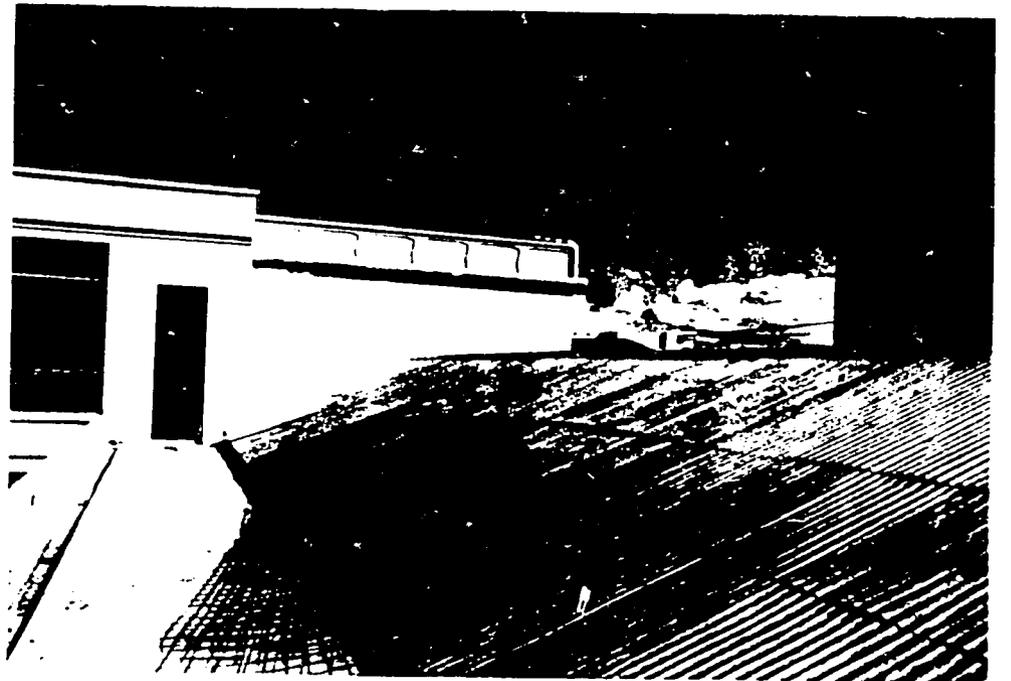


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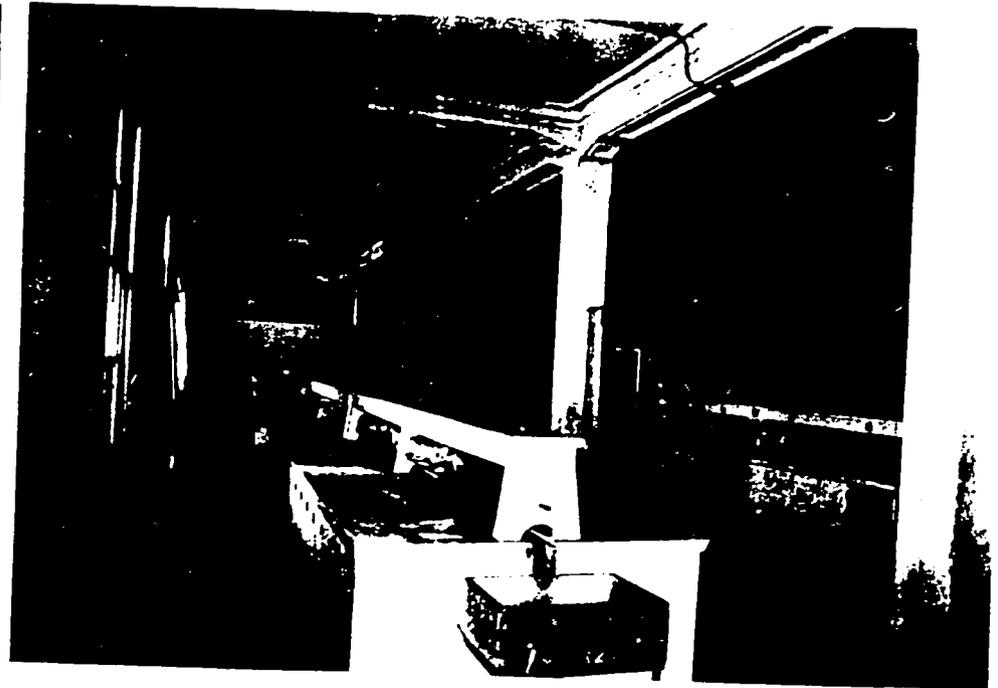


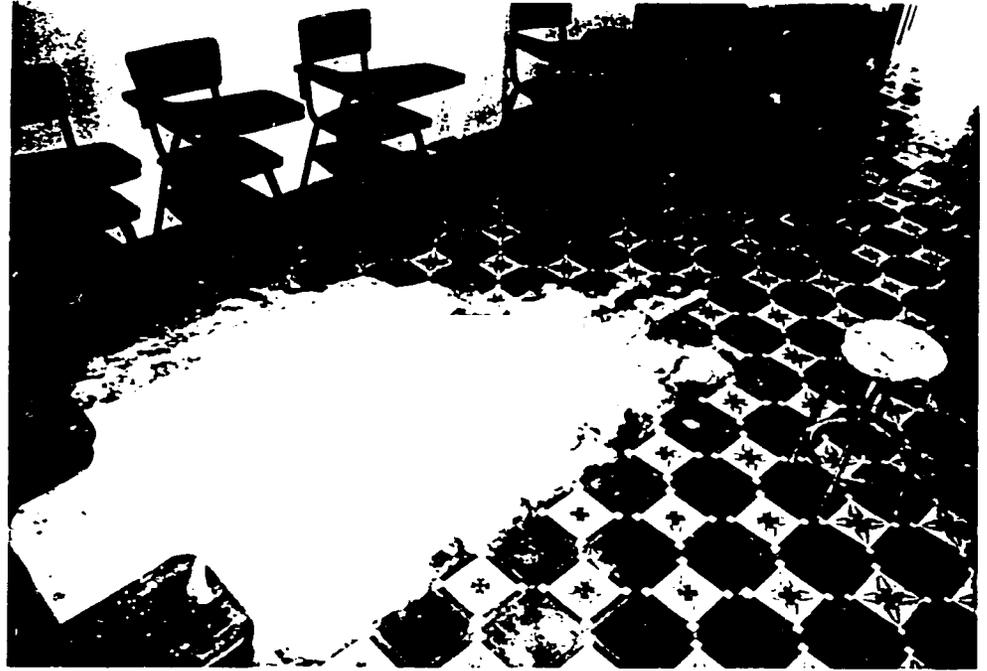
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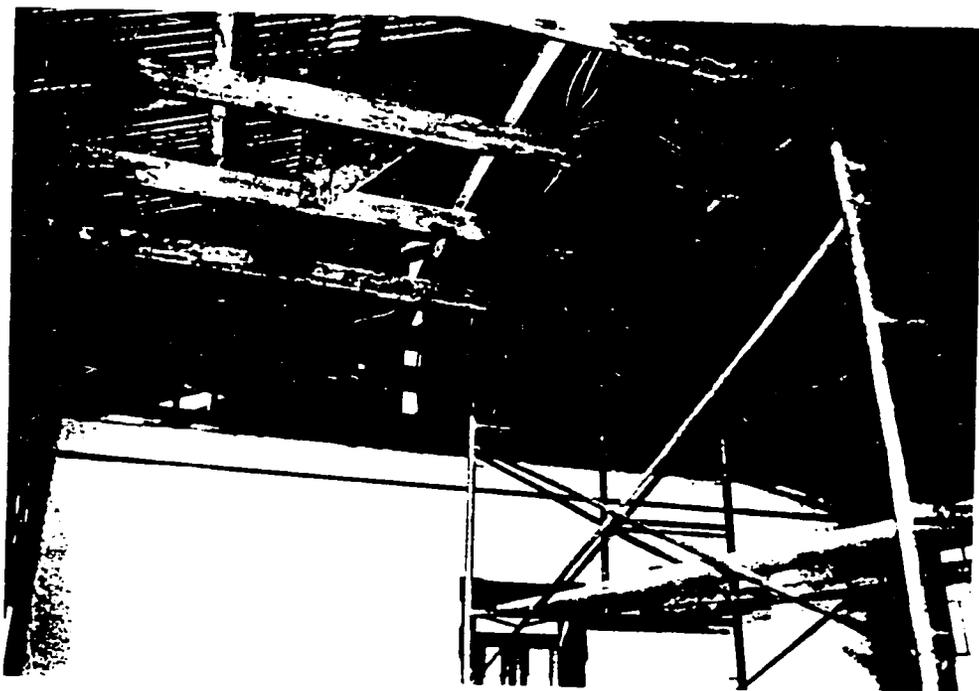
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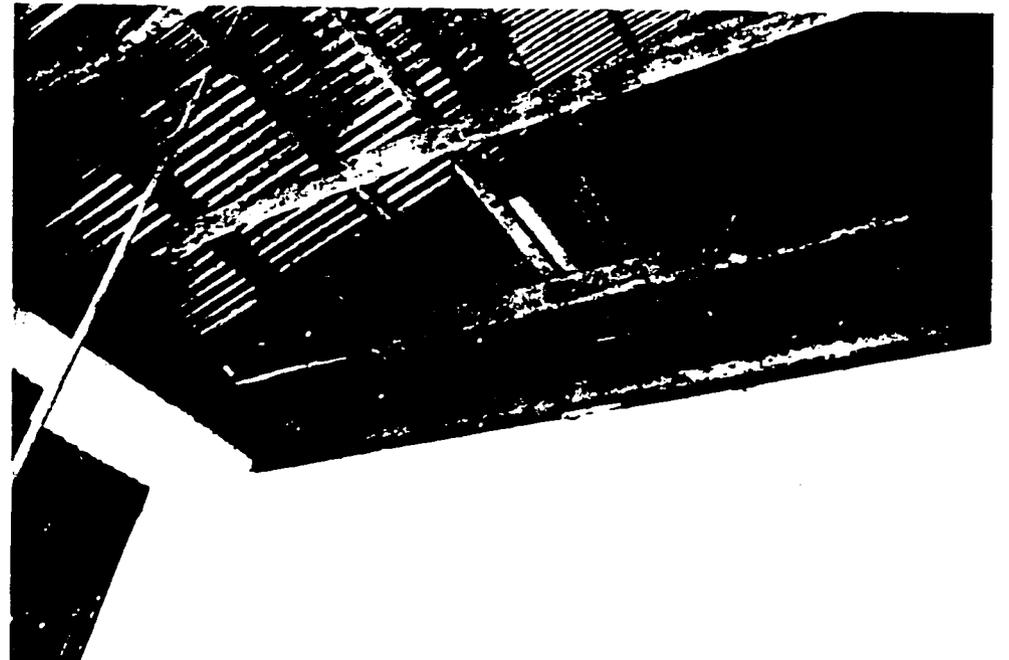
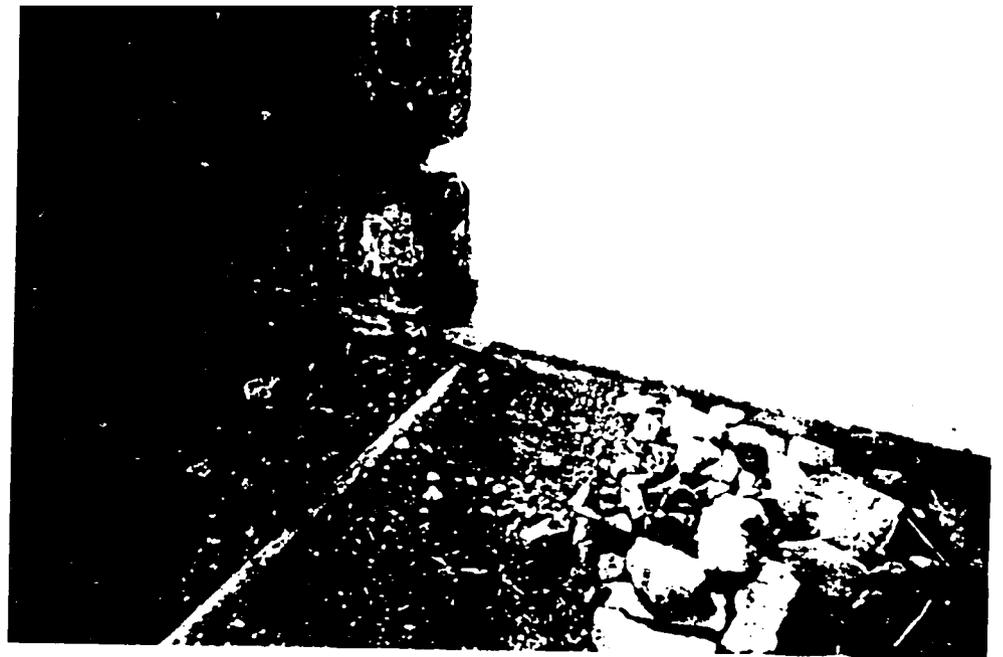




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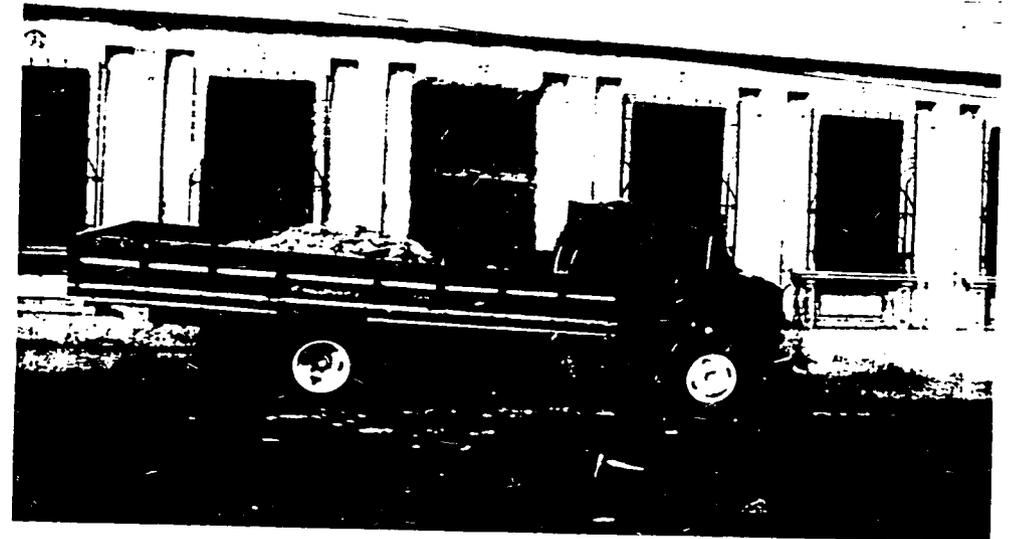


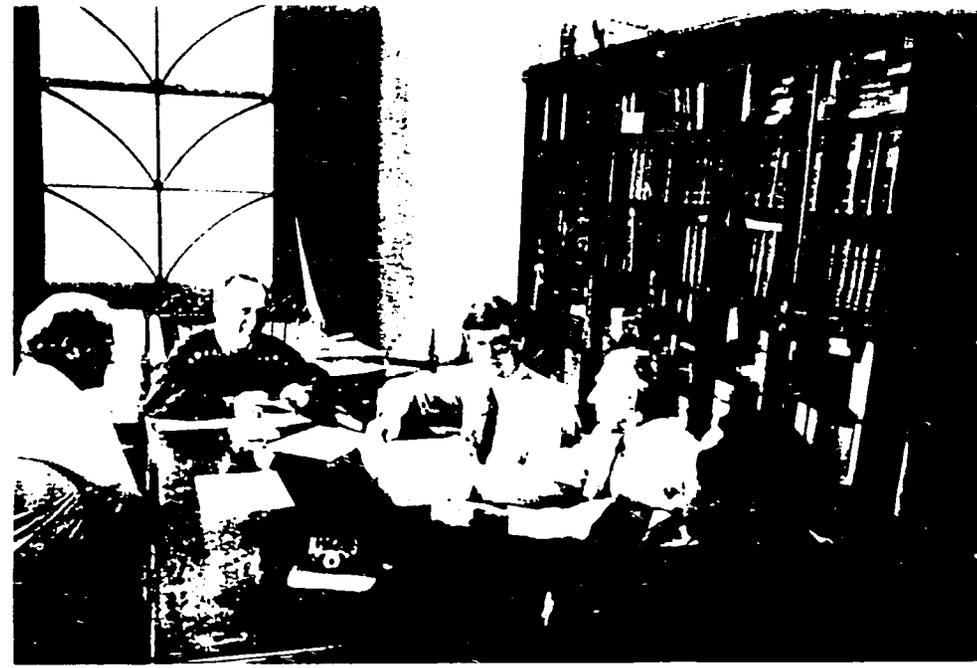
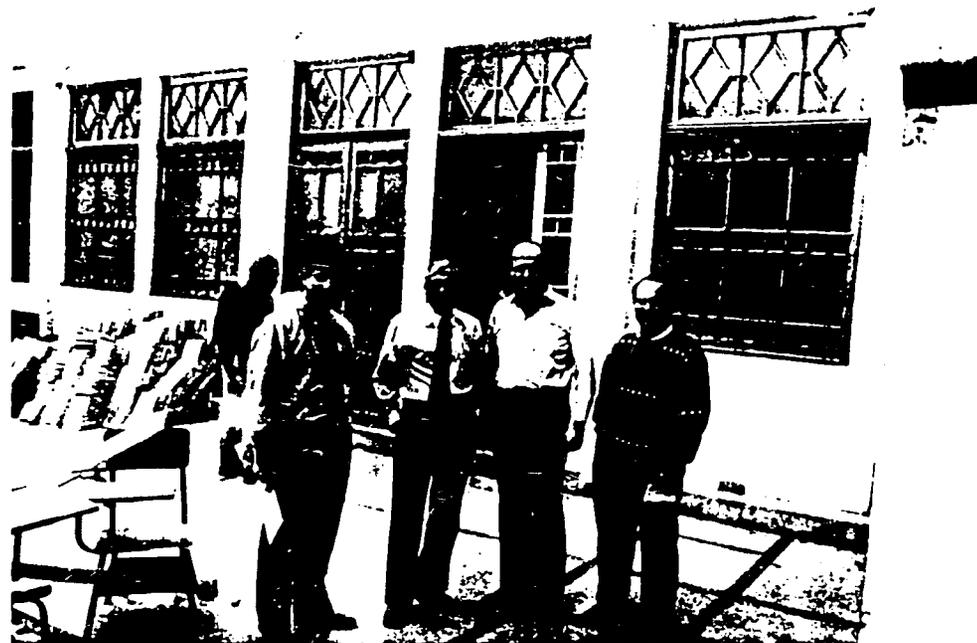
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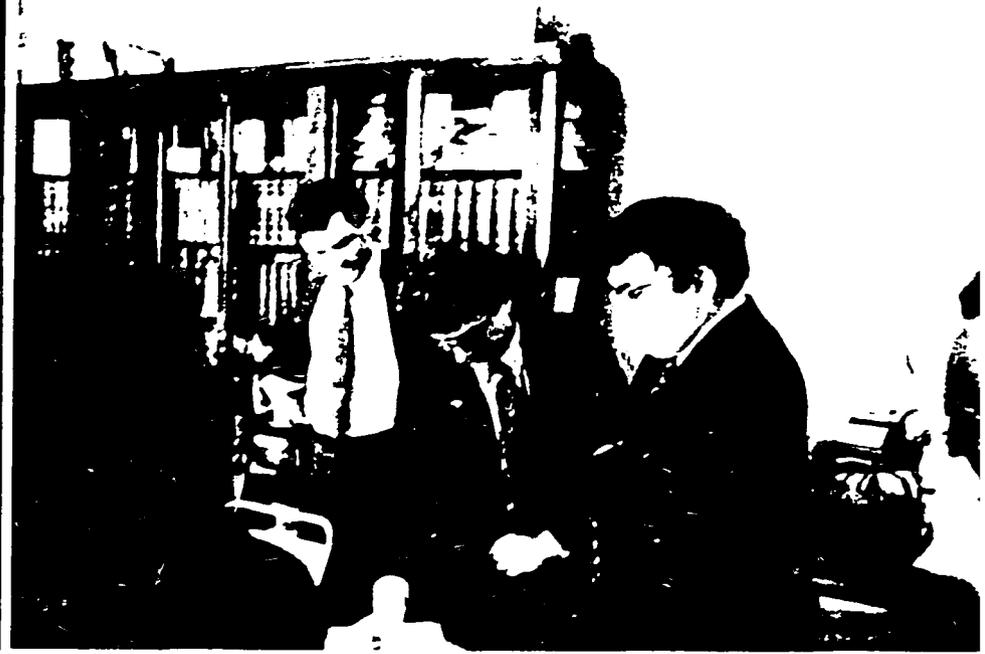


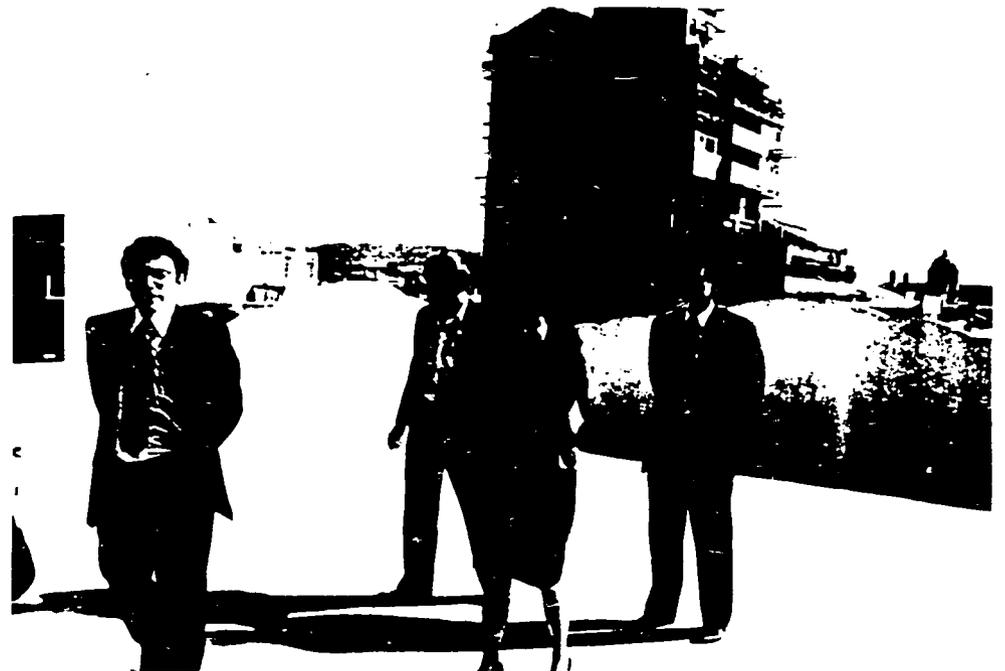
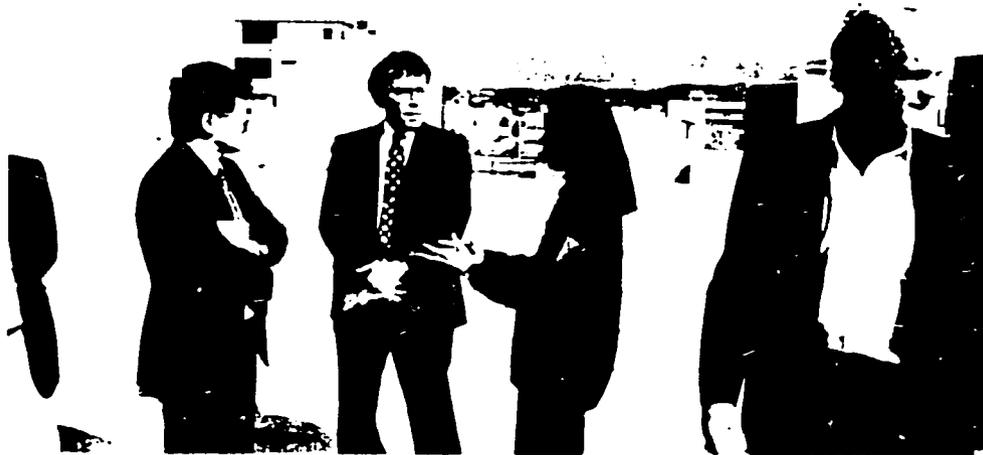
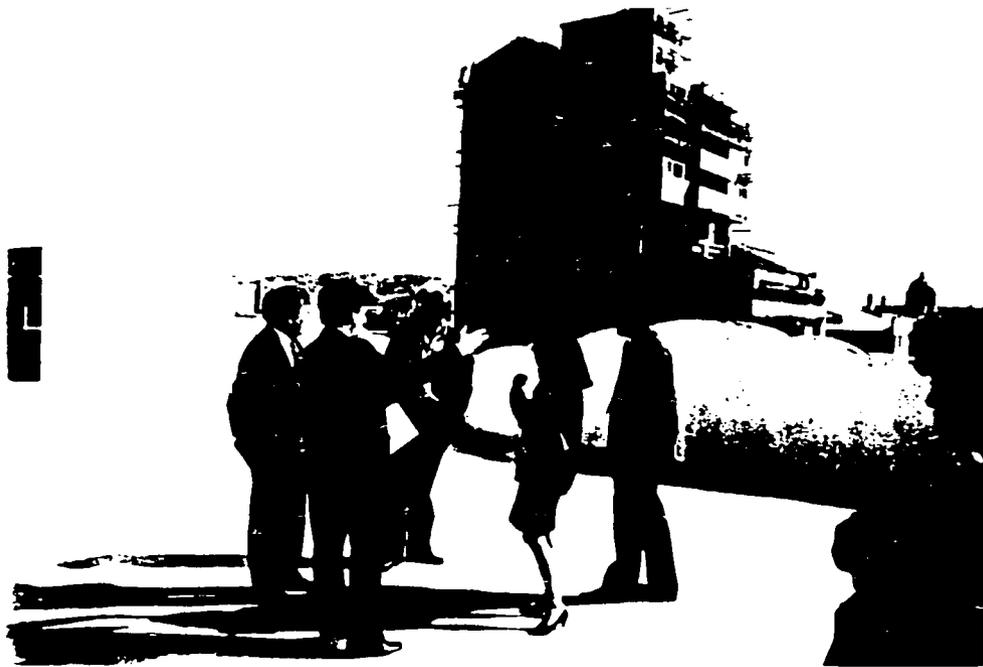
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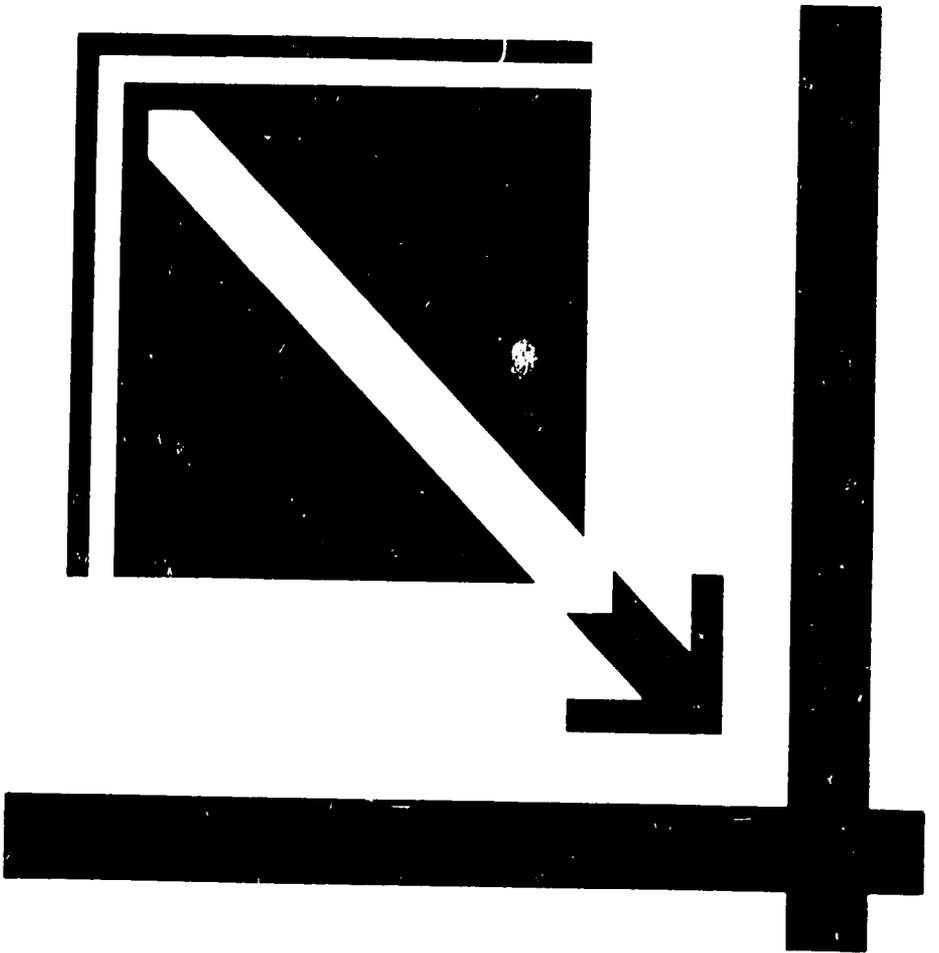






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PATH/AID

LAPROMED



FEBRUARY 1993

arquitectos Belayá Ibarra
& colaboradores
arquitectos e ingenieros

2a avenida n° 9-76 zona 1. guatemala, c a tel 20647

February 1, 1993.

The Subcontractor for the Doors and I went to LAPROMED to see what kind of work should be done to make the Windows tight.

- 1.- It will require to barnish the Windows on the outside in the First Floor and on both sides in the Second Floor.
- 2.- We will try to fix the broken windows to fit them in the openings. We also have to make a new window for the opening of a missing door in the second floor to a balcony. I will close the first 0.90 m. of the openig and make a window of the remainig opening.

At about 6:00 P.M. I got a call from Jacque Holden telling me that the samples of the "Planillas" and invoices were fine so to send them to PATH when we make them up.

I called Humberto Zardo to his Hotel Room and he told me that AID will make up checks for the IVA and with those checks the companies that make the sales should be able to pay the Government the required IVA. To send AID the copies of the "Facturas" on Monday and that they will take 8 days to give us the checks for us to give them to whoever sold to PATH/AID the merchandise.

February 2, 1993.

In the evening we met with Humberto Zardo to discuss the work that will have to be done to the windows. Mr. Rafael Ordóñez of Carpintería Centroamericana promised to give us an estimation of how much it would cost to do the job.

February 3, 1993.

Mr. Rafael Ordóñez of Carpintería Centroamericana sent us the estimated cost for the repair, sealing, making new windows, etc. of Q. 34,475.40 with IVA.

On the other hand, CONSTRUPOR, S.A., the Subcontractor for the Suspended Ceiling gave us a new prize with the changes that Humberto Zardo and Steve Fay made for this item and came up to Q.107,535.00, a saving of Q. 95,551.00.
Bottom line savings= Q.95,551.-Q. 34,475.00 = Q. 61,076.00.
This does not mean that we will not have an increase in another item.

February 4, 1993.

I talked by phone with Mr. Humberto Zardo and gave him the information about the cost for repairing the windows. He OK'd the work and the prize.

We are leaving the tile floors that we have pulled out in the Patio for LAPROMED to dispose of it. Most of it is broken. This is not the "historic" tile.
We have also left the furniture that had to be dismantled out in the Patio, all of it had termites. LAPROMED will dispose of it the way they feel best.

Mr. Humberto Zardo is leaving tomorrow and he said that he'll be back the first week in March.

February 5, 1993.

We found caverns under the floors. I gave the order to find out how deep they are and to fill them with select material well compacted.

We poured concrete for the foundations of the walls that make the toilet facilities.

February 8, 1993.

I took the Plumber to the Job to start as soon as possible. We have already dug the trenches for the drainages.

I can not pay anybody because I dont have the mechanics for getting the IVA checks from AID.
Humberto Zardo told me about a letter that PATH will be sending in reference of how the IVA will be paid.
Every body is working without pay because of the trust that through the years they have in us.

February 9, 1993.

We had to take down the little wall between rooms 200 and 300 because it was not safe. We had to increase the height, and the reinforcing was not adequate.

I talked to Lic. Gálvez about an "Acta" that they wrote and that I want to add certain things like that we gave LAPROMED all the materials, doors, etc. that we have dismantled and removed from the premises.

February 10, 1993

The Subcontractor for the Electricity was at the site. We talked about changing the wiring that goes to the rest of the building through the plenum. We are also thinking to connect to the new wiring the manufacturing that LAPROMED has in the Basement. When Humberto Zardo comes for his monthly visit we'll talk about it.

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February 11, 1993.

At 5:40 PM. I got a call from Jacque Holden and Humberto Zardo. Bob Bergen will be sending new plans for the AC. M-1, M-2, M-3.

Humberto wants me to send a new information: 1.- Creating a new page in the quantification and cost estimate for the Vinyl floor in the QC-Lab. It should be Page:18-1. 2.- Create page 43-1 for the Fixing of the Windows, (Carpintería Centroamericana). 3.- Create page 44-1 for the new Suspended Ceiling giving the description. In Section 19 of the Specs. create a new page for the materials of the Ceiling and the mechanical suspension. (19-5, 19-6, 19-7.)

We also talked about how we were going to charge the IVA. Jacque said that she was going to contact Dr. Chang of AID but in the mean time to pay the Subcontractors their advance payment without the IVA. At the end of their job they should present their Voucher with the IVA.

February 12, 1993.

We are making the holes for the reinforcing bars located in the corridor. In this area we have the office, the entrance to the Plant and to the toilet facilities.

We have kept erecting the walls made out of cinder blocks.

February 15, 1993.

We started the Plumbing system. The trenches were checked and began to put in place the 4" pipes.

We are still cutting the wall to make the opening for the door in room 304 to the corridor.

The "historic" tile floor in rooms 101 and 306 were pulled out and the ones that were not damaged were taken to the roof that for now is where LAPROMED is storing them.

February 16, 1993.

We met at the site with the Subs. of the A.C., the Suspended Ceiling and of the Dry Wall Partitions. I gave them and explained the cronogram of the construction to make sure when they should star and finish their respective activities.

Today we dismantled the Electrical Boxes that the previous contractor had placed in the manufacturing area. We gave them to Lic. Luis Gálvez. He is writing "Actas" and mentioning all what is happenig.

We are half way up with the walls in room 300.

February 17, 1993.

To the Subcontractor of the Electricity I gave him a 20% advance payment that it is equal to Q.80,510.00. To the Sub. of the repairing of the windows an advance payment of 50% that it is equal to Q. 19,250.50.

February 18, 1993.

At about 6:00 pm. I received a Fax from Jacque Holden with the machanics to follow for collecting the IVA..
At about 6:30 PM. I delivered via DHL the monthly Peport for PATH. Since we started January 18, it was delivered on February 18.

February 19, 1993.

We have continued with all the activities.

February 22, 1993.

I was at the job's site when I found out that Sara Tifft was in the premises. I went to talk to her and Lic. Gálvez and found out that the IGSS was inquiring at LAPPOMED who was the "Patrono". I had talked to a woman from IGSS before and had explained to her the relationship of PATH, USAC and AID. I thought that she understood everything after more than half hour of conversation on that subject but she did not. According to Lic. Gálvez she said that I was the Patrono. Sara took notice and I will talk to Humberto when he arrives for his next visit.

I gave the Subcontractor of the Roof a 50% Advance Payment that it is equal to Q. 20,025.00.

February 23, 1993.

At about 9:00 AM. I got a call from Bob Bergen. He said that he had sent the AC. Plans to the wrong address and that he was calling Federal Express to deliver it to my Office.

I had a meeting with the Subcontractors of the Suspended Ceiling and of the Wall Partitions. I gave the Sub. for the Suspended Ceiling an advance payment of 36.8% equal to Q. 37,000.00. And 40% equal to Q. 37,933.41 for the Wall Partitions.

To the Subcontractor of the Plumbing I gave him Q. 4,950.88 to pay for pipes and accessories, and Q. 1,140.69 that it is equal to 10% for his workmanship.

There are certain items that the people that sells them will not wait for the required time by AID for the IVA checks, so we have to pay them when we purchase the items. At the end of the Construction PATH may want to collect from AID what it was paid for IVA.

February 24, 1993.

I took some pictures for the Report.

The people from the Terrazo Co. were at the site to start cleaning the second floor tile floor.

I met Lic. Rodríguez and explained to him what we are doing.

I received the Plans for the AC. from Bob Bergen. Plan M-1 still missing but Mr. Bergen said that it looks like the old M-1. but that he will send it again.

February 25, 1993.

We have continued to erect the walls and work in the drainage system. The Electricians are also placing their Conduits in the walls. I have to coordinate all the activities so every body will not disturb the work of others but to complement each other.

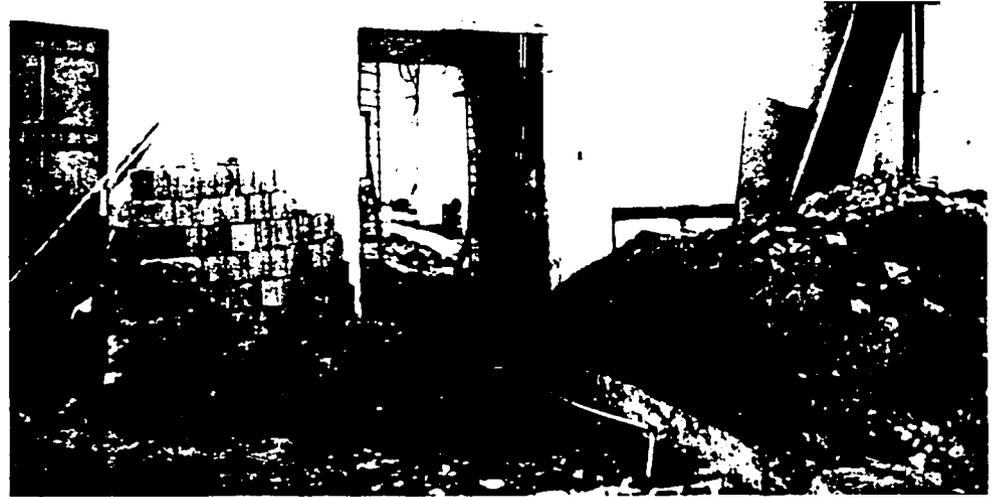
I gave the AC. new drawins to the Subcontractor of the AC. we have to clarify certaing dimensions and othe things with Mr. Bergen. I also gave them the Cronogram for them to know when they should start and finish the job.

February 26, 1993.

We had a meeting at the Job with the Subcontractors of the Suspended Ceiling, the AC. and the Patitions to coordinate the different activities.

I talked to the Plumber and told him to place a Ø 2" pipe from the Telephone Box in the sidewalk to where we will make the distribution of phones.

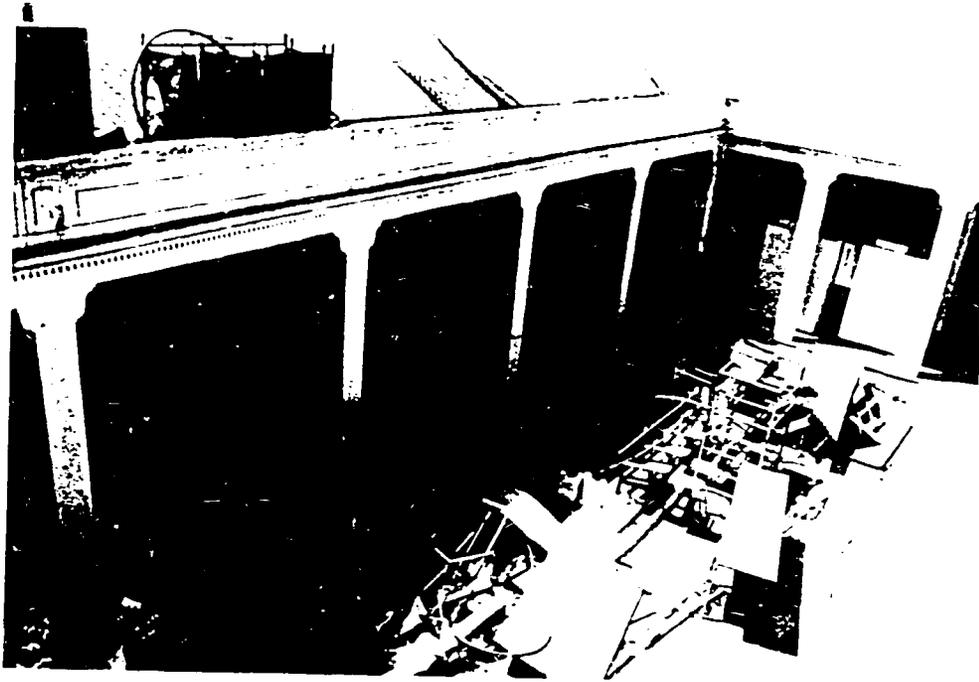
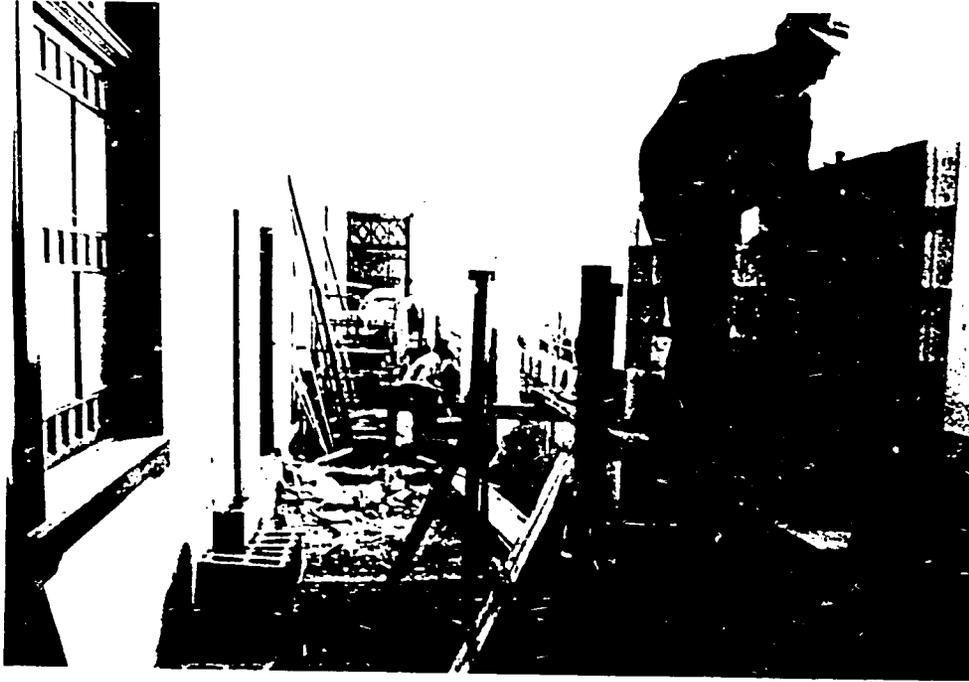
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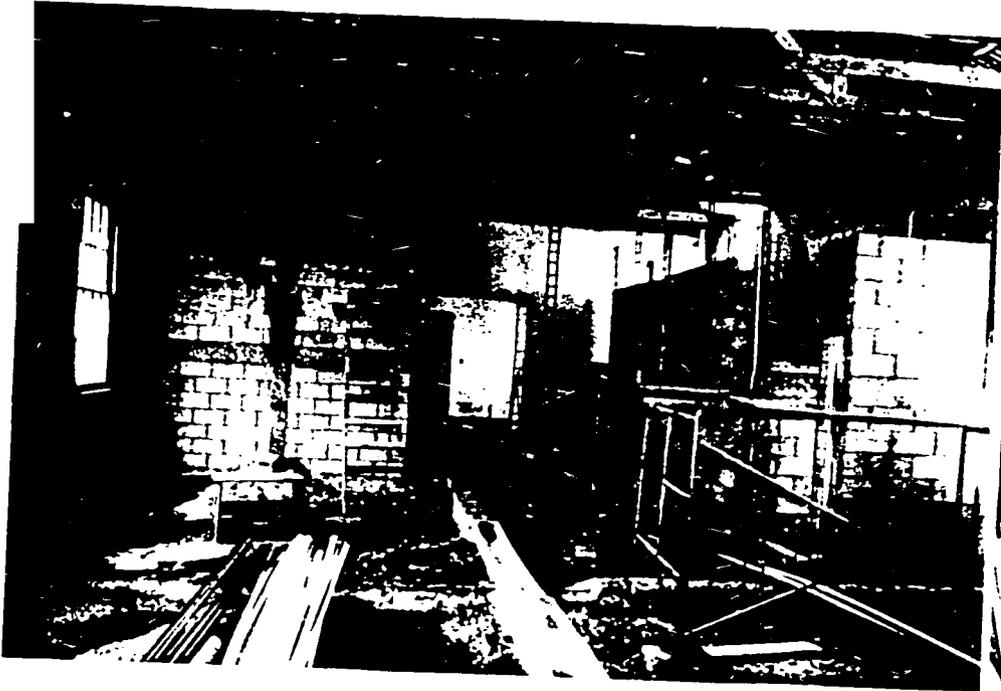
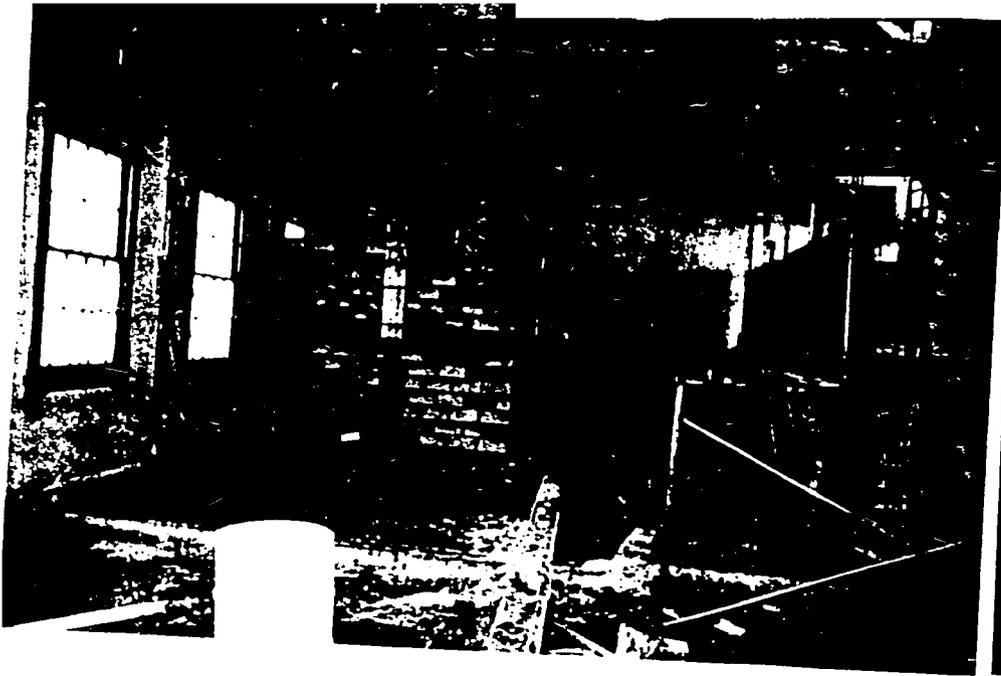
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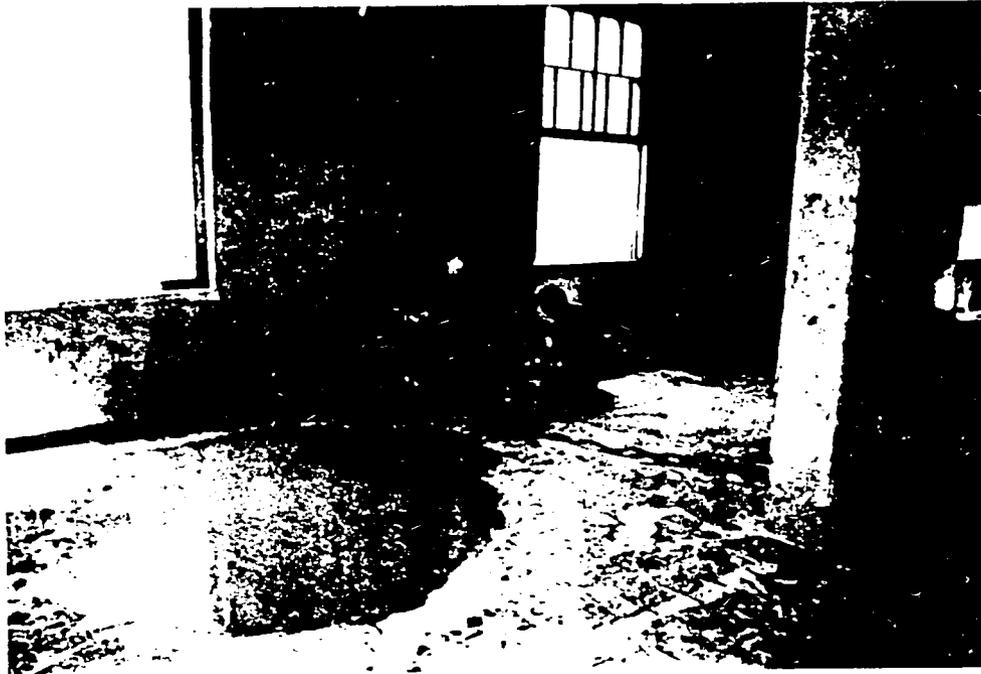
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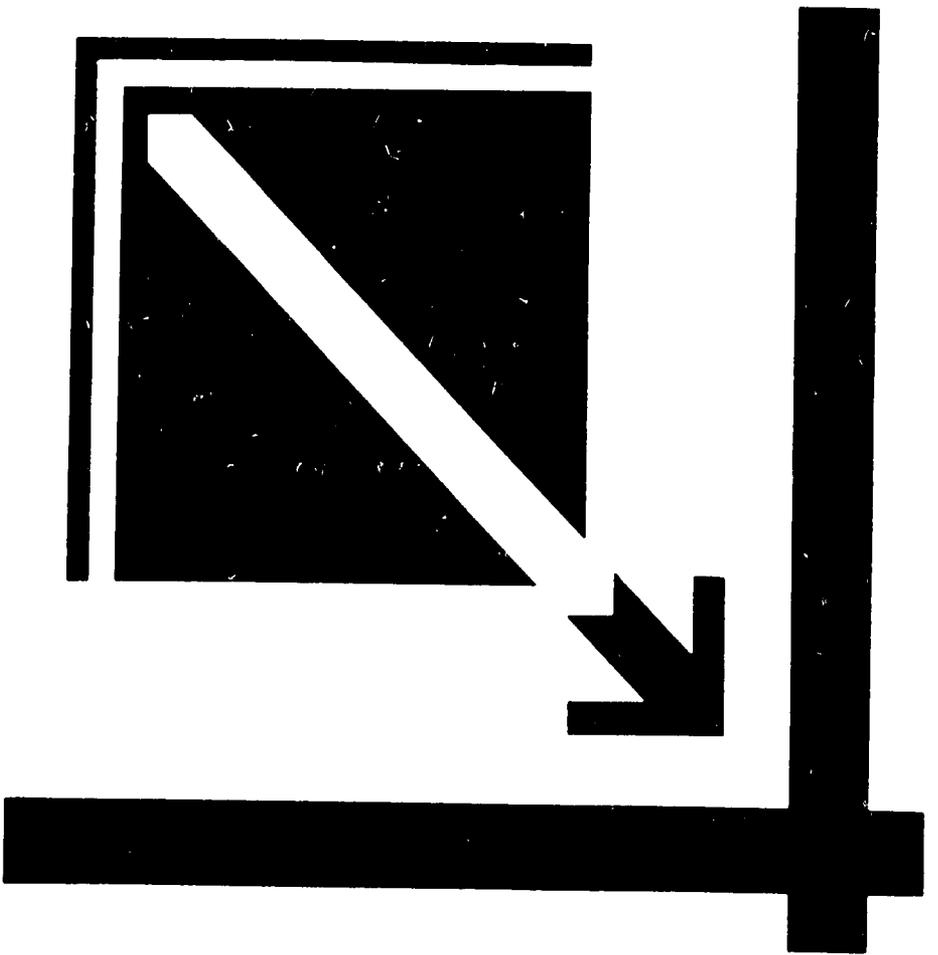


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PATH/AID

LAPROMED



MARCH 1993

arquitectos Bejaya Ilaena
& colaboradores
arquitectos e ingenieros

2a avenida n° 9-76 zona 1, guatemala, c a tel 20647

March 1, 1993.

We started to make the holes in the concrete slab of the roof for the A.C. equipment.
We placed a Ø2" PVC pipe in the sidewalk to connect to the telephone box for a new entrance of phones to the building. Immediately we poured concrete in the trench and left the sidewalk like it had never been touched.

March 2, 1993.

I met Humberto Zardo at LAPROMED. He had a meeting with LAPROMED officials and the head of Servicios Generales of USAC Ing. Manuel Terraza and his companion Arq. S. Cárcamo. We gave them a tour of the site and they promised to be in contact with us more often in order to be able to make their final report with more knowledge of what was done.

After LAPROMED Humberto and I came to the Office and discussed the IGSS peculiarities, the IVA collecting procedures, the vinyl floor, etc. With respect to the IGSS, Humberto will contact PATH's Attorneys.

March 3, 1993.

We are covering the trenches and caverns with select material and compacting them by hand, no mechanical means because we might break the pipes of the water supply and drainages.

We received a Fax from Jacque Holden on the procedures with AID on how to collect the IVA checks.

We also received a copy of a letter to Ms. Miriam de la Cerda of AID to serve as confirmation that Arq. Pelayo Llarena Sr. may request and pick up IVA reimbursements on behalf of PATH for the Subcontractors that we have hired.

Humberto Zardo and I met at the Job site and later on I drove him to AID.

March 4, 1993.

I met Humberto Zardo at the Construction in the morning. We decided to meet at the Office in the afternoon to decide on several items that needed PATH's approval.

At 4:30 PM we started the meeting and got to the following conclusions:

- 1.) I had gotten another estimation for the doors to see if we could make them less expensive but the materials that we had to make them with, were not acceptable for the kind of job we are doing. Mr. Zardo approved the more expensive one that comply with the original plans and specs.
- 2.) Mr. Zardo said that we could connect the LAPROMED lab. to the electrical circuit of one of the ovens, 30 Kw., that may not be used in the foreseeable future. (See Report of February 10, 1993)
- 3.) To change the location of the AHI-3 to the roof of the corridor instead of over the metal roof.
- 4.) Mr. Zardo gave his OK for changing the location of the metal cylinders for the gas because where they are located now will interfere with the new passage-way for the Lift.
- 5.) To put a chainlink partition in room 309 for the protection of the Hydro-pneumatic Equipment.

March 5, 1993.

In the morning I visited the Construction and found more caverns in the floor. Humberto Zardo, Lic. Gálvez and Lic. Rodríguez were there and verified what we had found. I gave the order to the Foreman to excavate around the caverns and to fill them with soilcement and select material and to compact them. My feeling is that it will be sufficient to compact it by hand and not by mechanical means. It is costing us a lot of time.

In the afternoon I went with Humberto Zardo to see the suppliers of the Vinyl tile for the QC. Lab. and asked them to quote a very smooth tile and not the one that they had sent for approval. After this visit we went to see the Contractor that is doing the roof, we got there too late due to the heavy traffic.

March 8, 1993.

I called Banco UNO, S.A. to find out if they had received the deposit for the Fee, and again they denied it.

The Subcontractor of the Gypsumboard partitions was in the premises and starting to erect the partitions. We found out that the building does not have 90° angles, so I told the Sub. to place the walls in accordance with the existing columns.

We have continued with the placing of the pipes for the cold and hot water that go under the floor.

The Electrical Sub. sent me a letter saying that the Distribution Boxes that we specified to be Federal Pacific are not being manufactured any more so that they will have to substitute them by Cuttler Hammer of equal characteristics. I gave them the OK.

I sent a Fax to PATH that my Fee has not been received.

March 9, 1993.

At 8:30 AM I received via DHL the rubber stamp that we have to use with proceedings with AID.

At about 10:30 AM. I got a call from PATH asking me if I had received my Fee. I told them that after calling this morning to the International Section of Banco UNO, S.A. asking again if they had received a transfer, a lady by first name of Carolyn said that she was absolutely sure that a transfer to my account has not been received.

I sent to PATH the February Montly Report by DHL.

Received the AC plans from Robert Bergen, they were sent to Costums.

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March 10, 1993.

Received two Faxes from PATH proving that the fee was sent. I contacted Banco UNO, S.A. several times and they denied receiving the money until I confronted them with the receipt from their own Bank that PATH had Faxed me. They checked again and found out that they did had received it. The people contacted at the Banco UNO, S.A. were: Mr. Nery García of the International Division and Mr. Saúl Recinos.

March 11, 1993.

We have continued with the erection of the walls that are made with concrete blocks, with the placing of select material, filling the caverns, etc. We have substituted the old PVC pipes for new ones for the water supply of the part that we are not remodeling. These pipes are under the area that we are working on.

We are placing the metal studs for the dry walls in the QC Lab..

I went to visit the Sub. for the metal roof and he has practically all the trusses made.

At about 5:00 PM I got a call from Marisela S. Martínez who wanted to know if I had gotten my fee from the Bank. I told her that after many consultations among themselves at the Bank, they found out that they had received the money. I asked Marisela to please expedite the next check for the construction because I still have to give some advance payments to the Sub. for the Doors, the Sub. for the Terrazzo Floors, final payment for the Metal roof, etc.

March 12, 1993.

We are working on the following activities: Finishing the erection of the concrete block walls, replacing the clay material in the ground for select material, placing the conduits and electrical boxes in the QC Lab., continuing putting the

studs for the dry walls in the QC Lab., forming the holes that we made in the slab of the second floor for the AC ducts, and some other minor activities.

In the afternoon I went to see the Subcontractor for the metal roof and took some pictures of the trusses for the Report.

March 15, 1993.

We are beginning to make the Ramp from the new entrance door to room 309. In the middle of this room there are two beams in the floor, I don't know what they are for, but we have to cut part of one to make room for the ramp. In Axis 7 plus 9.20mts. there is a wall that has a door in the middle, I will extend the ramp past this door and leave a step of plus or minus 0.18 mts. in front of the door. This door will be closed, condemned, because it will not be part of LAPROMED. The extension of the ramp is to get a less percentage of slope, it will be 10%.

At 6:45 PM to 7:10 PM I got a call from Humberto Zardo. He gave me the Specs. for the Forklift, He gave me the minimum of turning of 2.00 mts. (Actually 1.70) and 10% for the slope of the Ramp. The AC can be regulated from below. That they received the Vouchers and that PATH was sending \$47,000.00. That they also were going to send the second payment of the Fee. He mentioned that he will be in Guatemala April 12, 1993.

March 16, 1993.

At about 8:40 AM Lic. Gálvez called and told me that Arq. Julio César Velásquez had been at the job and that was not happy because we had placed the electrical conduits inside the walls and not exposed as he had mentioned in his approval. I went to talk to Lic. Rodríguez and Lic. Gálvez and told them the following:
1.- It is a good manufacturing practice to place the conduits and pipes inside the walls. 2.- The Remodeling work is being done in a Pharmaceutical Building that requires to be put up to date. 3.- If they want to defend the previous points, to ask the Ministry of Public Health for the method for placing the electrical conduits and pipes. 4.- If nothing works, we'll put the conduits exposed.

March 17, 1993.

At about 11:55 AM I called Dr. Chang of AID to see if we could meet to clarify certain doubts about how to collect the IVA. He said to meet him tomorrow at 9:00 AM.

We are placing the polyetilene on top of the select material in accordance with the detail in Plan A-2 2/29 that will serve as a vapor barrier.

Again I visited the Sub. of the metal roof and asked them to start the process of painting it.

March 18, 1993.

I met with Dr. Chang and Mrs. Miriam de la Cerda, I asked them if AID had a NIT and Mrs. de la Cerda said that it was 347442-9.

I called Arq. Julio César Velásquez of Antropología e Historia and gave him the technical reasons why we had inbeded the conduits in the walls. He still insisted on leaving them exposed. I told him that the Ministry of Public Health has their own Specs. and that we have to comply with them. He said to get those Specs. for him and that after studying them that he would let us know. He also wants a letter that will state that when the building is turned back to the previous use, that all the changes that we are doing now, will be undone.

My feeling is that if LAPROMED sends the letter with the statement that Arq. Velásquez wants and the Specs. from Public Health, that everything will be OK. Maybe.

I met with the Sub. for the AC and gave him the Plans and the explanation that Humberto Zardo had sent me.

March 19, 1993.

I received from PATH the first Letter-Amendment dated March 15, 1993.

At 5:35 PM I got a call from Marisela wanting to know if I had received the funds for the construction. I told her that I did. Q. 274,605.50, March 17, 1993.

We are having difficulties trying to get Cement for the construction. We will pour the floor slab with ready made concrete but before we do that we have to finish certain items that require cement.

We have continue with erecting the partitions in the QC Lab.

March 22, 1993.

On my daily visit to the construction I met with the Electrical Subcontractor who wants his second 20% payment but he wants to pay the IVA for his first and second ones. I told him that there was no problem now that I know the Mechanics with AID.

Lic. Gálvez was making a draft letter to the MOH asking them to interpret their Specs. where they say that "...the walls should be smooth, without anything projecting or salient..." to mean that no conduits should be placed on the walls but in them. As soon as he gets the answer he'll send it to Antropología e Historia.

At about 6:30 PM I got a call from Humberto Zardo. He wants: 1.- Specs. and Quantification and Cost Estimation for the Vinyl floor. 2.- With the March Report to send the Cronogram with the advances of the project. He will call April 2, 1993 and will be in Guatemala about April 12, 1993.

March 23, 1993.

I took some pictures for the Report. I have placed myself in the same spot where I had taken the previous monthly pictures, for PATH to judge the advance of the construction

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There has been a tremendous amount of debris that we are taking out of the construction.

We replaced two storm drains in the manufacturing area and placed a new one in room 101. This last storm drain comes from the third floor but we just replaced it one floor and connected to the old horizontal drain.

March 24, 1993.

We tested the water main for waterproof. We had a leak in the hot water pipe but it was soldered at the joint of an elbow where the leak was located. We followed the procedures for this type of test.

March 25, 1993.

I talked to Lic. Gálvez and he was writing the letter to the MOH about the desirability of having the electrical conduits inside the walls.

We have continued with all the activities of the construction.

I gave "La Alfombra Mágica" an advance payment for the Vinyl floor, 50%, equal to Q. 9,734.34.

I also gave the Subcontractor of the AC 50% that it is equal to Q.42,500.00.

March 26, 1993.

In the QC Lab. we have begun to place the Gypsumboard on the studs. Part of the electrical conduits are already in place.

I told the Foreman to cover the "Historic" tiles with polyetilene. These old tiles are being stored on the roof of the building in accordance with the directives of Lic. Rodríguez and Lic. Gálvez.

March 29, 1993.

The Gypsumboard is being placed on the studs in the QC. Lab.

We have continued with the plastering of the wall in the first floor.

We are starting to build an overhang or a concrete bracket in Axis "C" between Axis 3 and 4. It is needed to support two metal trusses.

March 30, 1993.

At 9:50 AM I sent a Fax to Humberto Zardo with the comments to the bid that PATH published.

I went to see the Subcontractor for the Doors and gave him a set of larger plans. He said that he did not take in consideration the windows in the partitions of the second floor and that he will have to give us a new quotation

In the afternoon I got a Fax from Jacque Holten asking for the Specs. and quantification and Cost of the Vinyl floor, I Faxe them to her instead of waiting for the March Report.

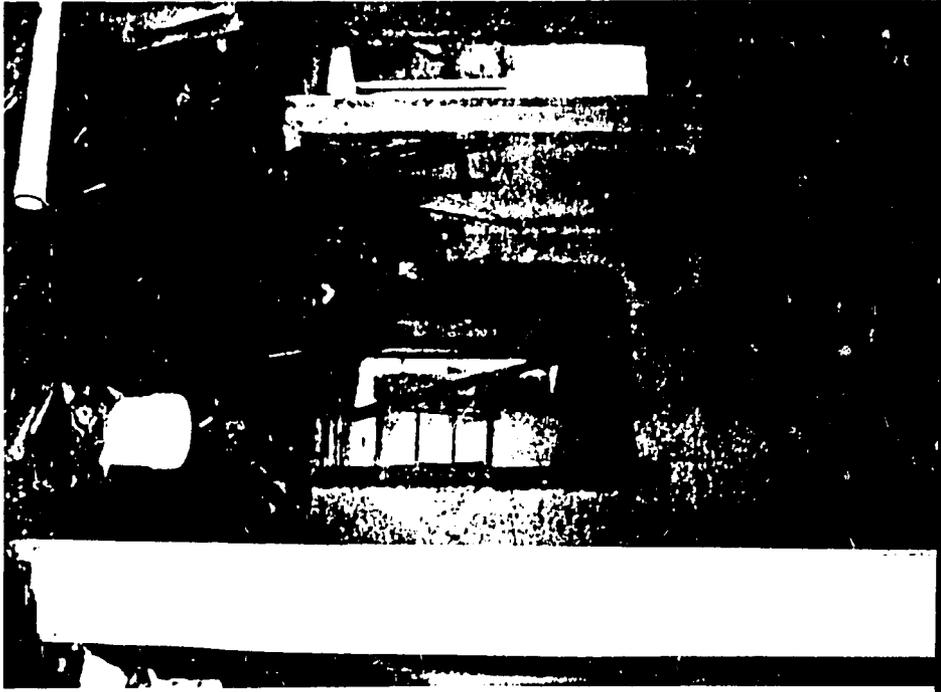
March 31, 1993.

We have continued with all the activities.

The entrance ramp is being excavated because the sub base was a fill done with loose material maybe from the 1917 earthquake.

FEB 1993



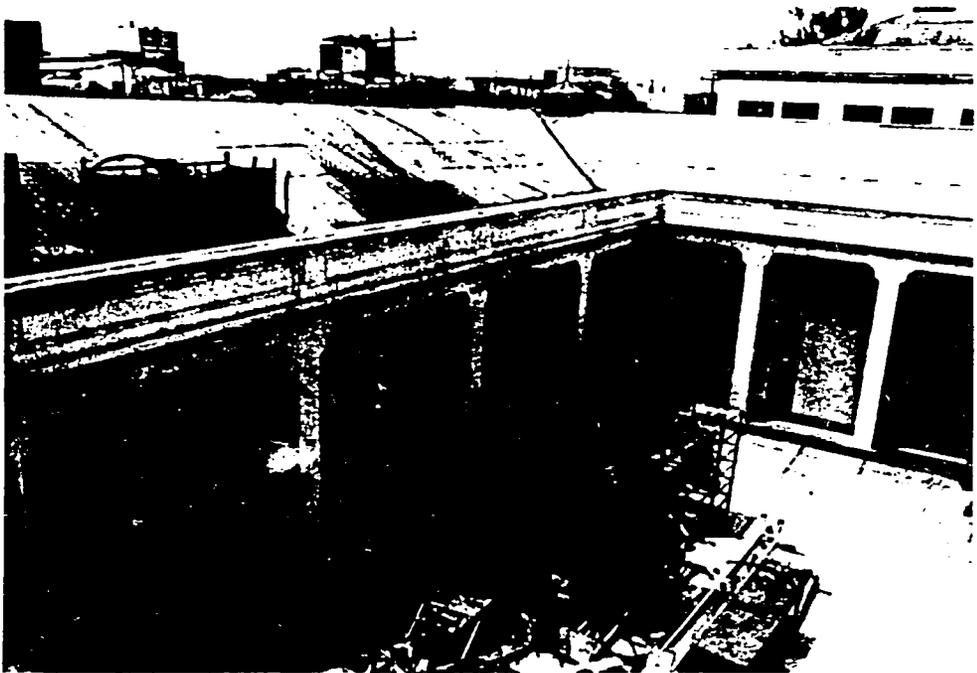


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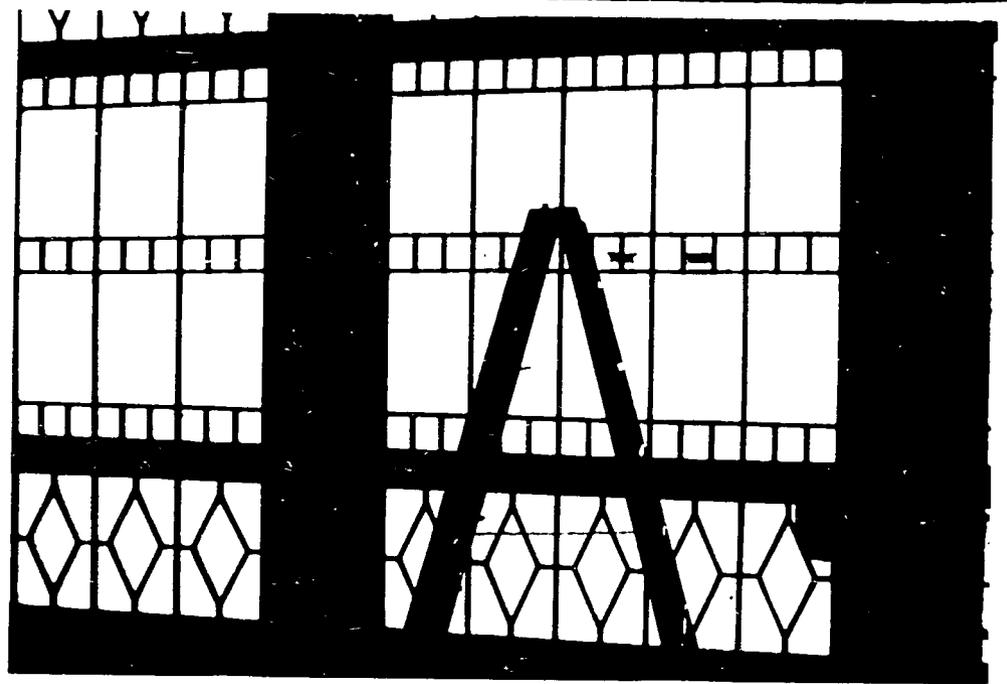
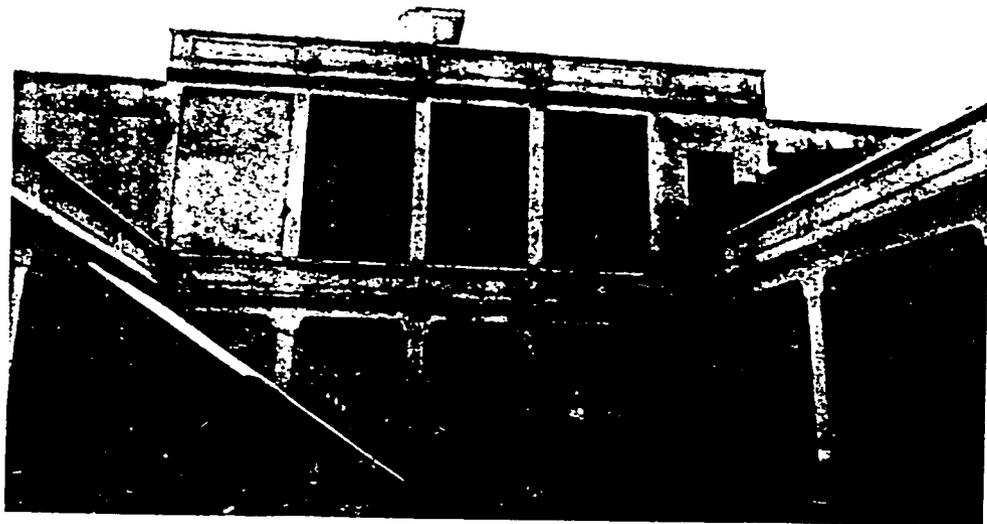
MAR 1993

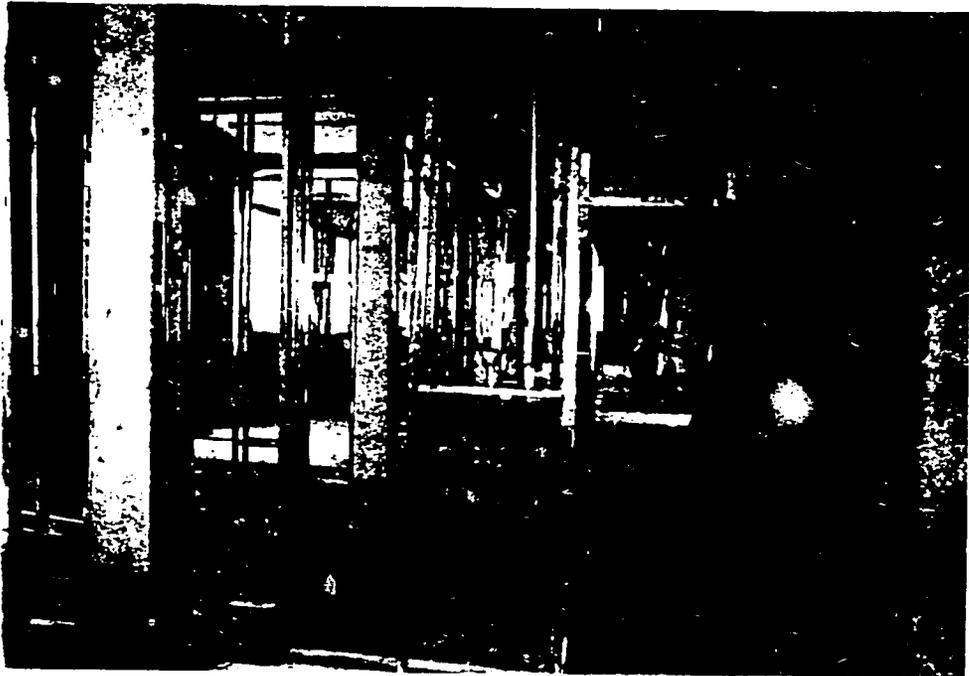


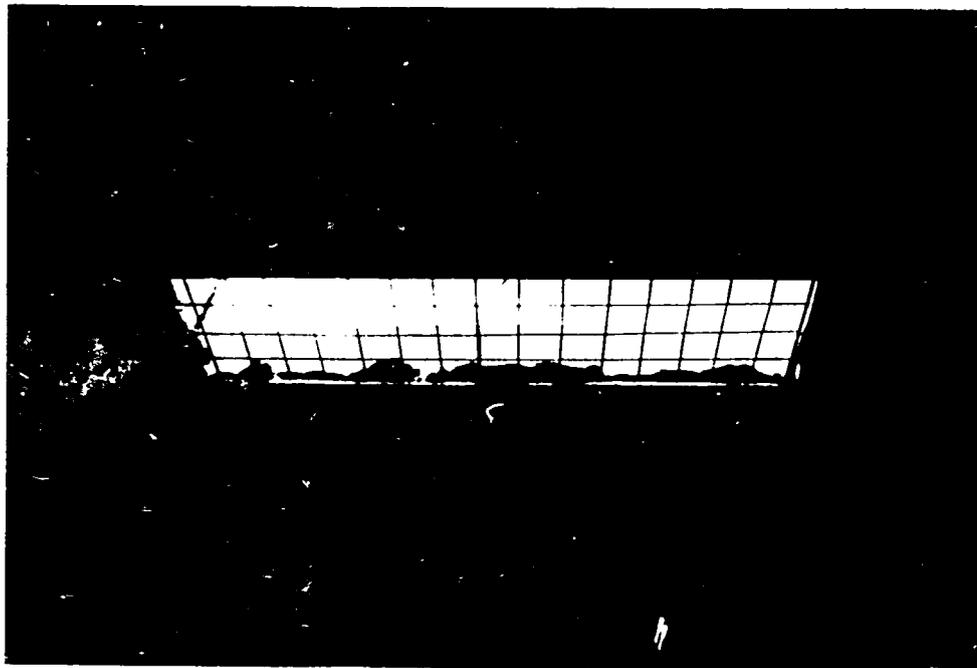
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ATTACHMENT D
Construction Timeline

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ATTACHMENT E
Summary Expenditure Report

Summary Expenditure Report

USAID/Guatemala
Contract No. 520-0339-C-00-2234-00

Contract Budget Category Expenditure Report:
October 1992 through March 1993

BUDGET CATEGORY	BUDGET AMOUNT	CUMULATIVE EXPENDITURE	FUNDS REMAINING
	[A]	[B]	[C] = (A - B)
Salaries	\$195,282.00	\$75,293.94	\$119,988.06
Fringe Benefits	96,808.00	22,141.48	74,666.52
Consultants	22,653.00	1,920.00	20,733.00
Travel/Transportation	80,828.00	25,050.78	55,777.22
Other Direct Cost	79,647.00	25,571.35	54,075.65
Equipment/Materials	298,505.00	0.00	298,505.00
Subcontracts	468,073.00	137,013.93	331,059.07
G & A	205,338.00	96,171.39	109,166.61
TOTAL	1,447,134.00	383,162.87	1,063,971.13
Fixed Fee (**)	14,472.00	3,831.64	10,640.36
GRAND TOTAL	\$1,461,606.00	\$386,994.51	\$1,074,611.49

ATTACHMENT F
Travel Summary

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TRAVEL SUMMARY
(October 1, 1992 - March 31, 1993)

October 1992

H. Zardo	(10/15-24/92)	Project Initiation Visit
S. Tifft	(10/19-13/92)	Project Initiation Visit

November 1992

F. Catron	(11/15-24/92)	ORT Program Market/Distribution
S. Tifft	(11/29-12/5/92)	Quantitative ORT Program Market/Distribution
H. Zardo	(11/29-12/12/92)	Production Technical Assistance

December 1992

See above.

January 1993

H. Zardo	(1/23-25/93)	Equipment Construction Oversight Production Technical Assistance
J. Dhanjal	(1/23-27/93)	Equipment Construction Oversight Technical Assistance
C. Godínez	(1/24-29/93)	Qualitative
S. Fay	(1/25-29/93)	Construction Oversight

February 1993

F. Catron	(2/10-23/93)	Quantitative ORT Program Market/Distribution
S. Tifft	(2/16-24/93)	Quantitative ORT Program Market/Distribution

March 1993

H. Zardo	(3/1-6/93)	Construction Oversight Production Technical Assistance
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