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USOM/Iran - A ten year summary of the
United States and Iran - a joint
effort in public health, 1951-1960

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~~Public Health~~
~~Health~~
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A
TEN YEAR SUMMARY
THE UNITED STATES AND IRAN
A JOINT EFFORT IN PUBLIC HEALTH
1951 1960

A.I.D. HISTORICAL AND
TECHNICAL REFERENCE
ROOM 1856 NS

FOREWORD

This summary is presented in an attempt to provide quick reference for information on the fiscal and technical areas of the United States health effort in Iran. It does not provide detail description of the successful Public Health Program in Iran. The latter information has been presented in the termination reports of Project 265-51-015 Malaria Control, Project 265-59-034 Administrative Support to the Public Health Cooperative, and Project 265-54-072, Training and Demonstration in Public Health.

Vernon M. Bailey
Program Analyst

The joint U.S. Iran health effort began in April of 1951 with the arrival of three U.S. Public Health consultants in Tehran. The early efforts of this team were devoted to consideration of the malaria control problem because of its critical condition at the time. Immediate aid was given and during the period May 1951 to December 1958 the U.S. contributed \$3.99 million and \$2.27 million equivalent in counter part funds, making a total of \$6.26 million. During the years FY'52 thru FY'55 the Iranian government contributed the dollar equivalent of \$2.6 million. The full report on this effort has been made in the termination report, Project 15 Malaria Control. In 1957 the control effort in malaria was changed to an eradication program and this effort became a part of the over all project activity of Project 072 Training and Demonstration in Public Health. Project 72 was terminated in March of 1959 formally but activity was transferred to new projects on 1 July 1958 (FY 1959).

It is probably more convenient to report the U.S. aided health effort in Iran in terms of phases eventhough it is a continuous effort and the phases may not be complete and distinctive.

The first phase from 1951 to 1953 might be called the survey and emergency aid phase. It was during this period that the first program agreement in health was signed; program agreement 3, Program Agreement In Public Health signed May 1952. This agreement provided for the future joint effort in health through a number of Project agreements during 1952-1953 namely:

| No. | Title | Expended | | COI |
|-----|--|--------------|---------------|--------------|
| | | U.S. | Rials | Rials |
| | | \$ | | |
| 2 | Const. of Tehran Water Treatment Plant | 2.01 million | 45.4 thousand | Not Known |
| | Effective 6-5-52 Terminated-Inactive | | | |
| 11 | Health Proj. Agree. under Rural Improvements Program | 896 thousand | 53.9 million | 22.1 million |
| | Effective 6-23-52 Terminated 3-31-53 | | | |

| No. | Title | Expended | | GOI |
|-----|--|--|-------------------|------------------|
| | | U.S. \$ | Rials | Rials |
| 15 | Malaria Control Effective 6-10-52 Terminated 12-17-58 | 3.99 million | 172.52 million | 102.0 million |
| 18 | Dizful Sanitation Project Effective 6-18-52 Terminated 9-15-54 | 71.0 thousand | 1.46 million | not known |
| 13 | Bandar-Abbas Water System Effective 6-21-52 Terminated 3-6-53 | 50.0 thousand | 1.3 million | 1.45 million |
| 23 | Deep Water Wells Effective 6-21-52 Terminated 3-6-53 | 196 thousand | 2.97 million | 6.0 million |
| 27 | Water Systems Effective 6-2-52 Terminated 11-4-53 transferred | No funds expended project trans- ferred to Project 072 Training and Demonstration of Public Health | | |
| 34 | Administrative Support to the Pub. Hlth Cooperative Effective 2-4-53 Terminated Inactive | 10 thousand | 46.71 million | 154.4 million |

The attention of the team of U.S. consultants was drawn to the pressing need for emergency aid and the mission made known to the team plans for several emergency aid projects listed below which were not under the jurisdiction of public health personnel but were directed toward the improvement of conditions in public health:-

| No. | Title | Expended | | GOI | Executed |
|-------------------------------|---|----------|--------------|------------------------------|----------|
| | | U.S. | Rials | | |
| | | | | not known | 2-17-54 |
| 22 | Shahi Water Supply Improvement | --- | 1.0 million | known | |
| 31 | Zahadan Water Supply Improvement | --- | 6.75 million | not known | 3-9-54 |
| 32 | Tehran Demonstration Childrens Home | 15,000 | 10.0 million | 16.0 million | 6-10-54 |
| 35 | Public Health Cooperative Organization in Shiraz | --- | 5.5 million | 1.0 million | 4-21-54 |
| 36 | Razi Institute Serotherapy Laboratory Activated 4-21-54 | --- | 20.0 | not known | 4-21-54 |
| 37 | Construction of Meshed (Jorjani) School of Nursing | 10,000 | 12.0 million | not known | 4-21-54 |
| 38 | Medical School Construction at the University of Tehran | 60,000 | 4.45 million | not known | 4-21-54 |
| 39 | Completion of Hospital for mothers and Infants Society | --- | 1.0 million | not known | 4-21-54 |
| 41 | Completion of T.B. Center at Sangueladj Park Tehran | 22,900 | --- | not known | 6-10-54 |
| 45 | Completion of Rey and Kashan Hospitals | --- | 5.7 million | not known | 6-30-54 |
| Project Funds agreement No. 5 | Completing Tehran Slaughterhouse | 15,000 | 3.3 million | reimbursed U.S. Contribution | 6-29-52 |

These projects are now inactive having been completed during the years 1952 - 1957.

The principal recommendation of the U.S. survey team supported by the consultation of Dr. J.P. Cambell and Dr. Van Zila Hyde of ICA/W and PHS was the establishment of a Public Health Cooperative in order to implement and administer a public health program. The Cooperative was formally established by the First Extension of Program Agreement No. 3 signed on Dec. 31, 1952. The organization

became functional in April of 1953. A general review of its policy is found in appendix I and a summary of its activities appears in appendix II.

During the years 1951 to 1953 which is called Phase I for the purpose of this report, U.S. personnel made notable contributions to the development of a rural health program. Appendix III presents a summary of that effort.

The birth of the Public Health Cooperative might be considered as the beginning of Phase II in the U.S. aided health effort in Iran. It was deemed advisable to consolidate all projects in health under one project titled Training and Demonstration in Rural Public Health. This project was numbered 072 and signed on November 4 1953. The following project activity and funds were transferred to it:-

| No. | Title | Expenditures | | GOI | Executed |
|-----|---|--------------|---------------|--------------|----------------------------|
| | | U.S. | Rials | Rials | |
| 50 | Trng. & Démon. in Pub.Hlth | 589,000 | 65.34 million | 8.19 million | Transferred to Project 072 |
| 52 | Deep Wells | 712,500 | 18.39 million | 15.0 million | " |
| 58 | Trng. of tech. at the Pasteur Institute | 125,000 | --- | 9.23 | " |
| 60 | Sera production at the Razi Institute | 37,725 | 5000000 | 22.0 million | " |

Project 072 was terminated in March 1959. A controllers report dated 18 May 1959 summarized the U.S. and GOI contributions as follows:-

| | |
|--|-----------------------------------|
| ICA U.S. Dollar Contribution | \$2.3 Million |
| U.S. and GOI dollar equivalent in contribution and counterpart funds | 6.4 Million |
| Total | \$8.7 Million as of 30 June/ 1959 |

During the life of Phase II, U.S. technicians were generally responsible for operations and training. In March of 1956 it was decided to dissolve the Public health Cooperative and turn over operational responsibility to the General Department of Public Health the new organizational name of the preventive medicine department of the Ministry of Health. Personnel of this organization became responsible for operations and U.S. personnel continued to provided training and advisory services.

Project 34 Administrative Support for the Public Health Cooperative was signed on 2-4-53 and became inactive with the dissolution of the Cooperative in March 1956. The U.S. dollar contribution amounted to \$10,000 and a Rial contribution of approximately 47.7 Million. The combined dollar contribution totaled \$630,000.

The rapid development, expansion and training activities which took place under the PHCO provided Iran with an operating public health organization. The establishment of the General Department of Public Health inaugurated a third phase in the U.S. aided health effort and can be considered as beginning in 1956 and terminating in 1958 with the termination of Project 72. During this period Iranian personnel continued to rely heavily on the advice and direction of U.S. personnel while gaining experience and knowledge concerning the operation of a public health organization.

The general review of operations under project 72 are found in appendix IV which presents the program of project 50 which was not instituted and was replaced by project 72. The activities described are essentially the same as those performed under project 72. During this period U.S. technicians consolidated their efforts and with the future in mind evaluated past efforts in their respective disciplines. These evaluations are attached, appendix V, VI, VII, VIII.

At present (1958-) U.S. aid to the health program of Iran could be considered in its fourth phase. Assistance is provided through the following projects.-

| No | Title | Activated |
|-----|--|------------|
| 207 | General Nursing Services | 1-7-58 |
| 208 | Health Administration | " |
| 209 | Environmental Sanitation | " |
| 210 | Quarantine and Vessel Sanitation | " inactive |
| 211 | Medical Education | " |
| 212 | The Jorjani Nursing School | " |
| 213 | Malaria Eradication | " |
| 214 | Hospital Administration and Medical care | " |
| 215 | Health Education | " inactive |
| 091 | Shiraz Medical Center (Iran Foundation Contract) | " |

Dr. Samuel B Kirkwood Chief, Public Health Division in August 1960 presented a general status report on the present and future of the USOM/IRAN Health Program. This summary is attached below IX.

Present Status of USOM/Iran Health Program

A. The present period is, one of transition for the Mission's health program. Even though four years have elapsed since the end of PHCO, and the establishment of SAA, the shift to an integrated Ministry with a fully supported department of public health has not been accomplished. Accordingly, the position of the US technicians in the future is not clear.

B. Much the same may be said of the Ministry, for the full import of the shift from a single orientation of medical care to a fully integrated and broadly conceived health ministry has not been realized by all who will be concerned. The leaders are making great and valiant efforts in this direction, but much time will be required.

STATEMENT OF POLICY NO. 1
of the
PUBLIC HEALTH COOPERATIVE ORGANIZATION
July 29, 1953

Now that three and one-half months have elapsed since the beginning of the operation of the Public Health Cooperative Organization, it is felt essential that a general statement of policy be made which will guide all persons now engaged in future planning and present activity toward the goals and in the general manner which has been determined. The Public Health Cooperative Organization has been set up by project as a part of the Ministry of Health though in a semi-autonomous position which has permitted it to develop working procedures and policies different from those of the Ministry as well as TOI, its other parent organization.

As is true of any organization, particularly those which are public in nature, the funds available tend to circumscribe the activities and partially determine the policies of that organization. It is within the framework of the present budget that the present statement of policy is determined.

The general policies of the Public Health Cooperative organization are as follows:

1. The development of a modern organization to carry out public health work in Iran.
2. The placement of responsibility on the Iranian staff members as each one becomes trained and capable of carrying on his particular type of work.
3. The development of confidence by the people of Iran, particularly among governmental agencies and the deputies of the Majlis, in public health work and in the organization which carries out this work so that it will be an Iranian financed agency in the future.
4. The development of an efficient adaptable administrative organization within the Public Health Cooperative organization which can carry on the duties of the organization in the best manner possible.
5. The payment of salaries commensurate with an individual's abilities and training and the cost of living of Iran which will permit the employees of the Public Health Cooperative Organization to devote all their efforts toward their work in the Public Health Cooperative Organization with no need for additional outside income.

BEST AVAILABLE DOCUMENT

" 2 "

6. The development of country-wide demonstration and training projects to instruct the people in new and proper methods by which they may improve their health.
7. The training of professional and auxiliary personnel in modern public health methods so that they may carry on the program of the Public Health Cooperative Organization intelligently.
8. The planned elimination of certain serious individual diseases from Iran and the diminution of all diseases.
9. The development of centers of public health activity throughout Iran which will provide local health services to their surrounding areas.
10. The improvement of the general nutrition and living habits of the people of Iran.
11. The improvement and modernization of public health activities already being carried out by preventive medicine section of the Ministry of Health.

To guide the members of the Public Health Cooperative Organization further, more detailed policies will be discussed below in relation to the various types of activities of the Public Health Cooperative Organization.

ADMINISTRATIVE

1. The administration of the Public Health Cooperative Organization will follow the outlines as set up in Project No. 34, as implemented by General Orders and Staff Notices and as discussed in the forthcoming manual on administrative policies.
2. All regional offices will follow the general pattern of the central office within the limits of each region's individual problems. All regional administrative personnel will become acquainted with the procedures now carried on in the central office.
3. No activities may be carried out which would bring the cost of the regional activities above the allocation of funds for that particular activity. All activities must be adjusted to fit the budget allocated.
4. All offices of the Public Health Cooperative Organization will do their utmost to create within the public's mind the realization that the Public Health Cooperative Organization is a part of the Ministry of Health.

GENERAL PRINCIPLES

1. All work should tend toward the development of local health services.
2. School health, maternal and child health, midwifery training, home visiting, health center facilities, immunizations against communicable diseases, and specific diseases control programs are to be a part of the development of each regional program.
3. Standard record forms for use throughout Iran in all phases of work are to be developed and used by all regions.
4. At all times work which is undertaken should have as its goal the elimination and reversion of diseases and disease producing situations of the community for the community, not each individual, is our "patient".
5. All work in any area is to be carried out with the cooperation of existing health personnel.

ENVIRONMENTAL SANITATION

1. All projects carried out shall be considered demonstration projects whether they be water distribution systems, latrine installations, etc. Certain projects such as latrine installations should be done as demonstrations particularly.
2. All projects wherever they take place, must be preceded, accompanied and followed by teaching of the reasons the project is carried out.
3. Village cooperation should be assured for each project before it starts, preferably by a formal contract. The cooperation shall include contribution of money, materials or personnel, or all of them on the part of the villagers. There should be no need for unskilled labor to be hired to do work in any village project.
4. No new projects should be begun unless there is money available and trained personnel ready to work on the projects.
5. Standard plans for construction projects, as for baths, latrines, distribution systems, reservoirs, etc., are to be developed as soon as possible.

6. No new project is to be undertaken unless it, in some way, ties in with the over-all area program in public health.
7. Any new development in the field of environmental sanitation is to be linked with the Iranian way of life, and Iranian habits are to be the point of departure for the projects.

HEALTH EDUCATION

1. All instruction, teaching, showing of films or other method of health education are to be worked out in conjunction with or by the regional health educator.
2. All work which is carried out is to be accompanied by thorough health education whether this be in school health, environmental sanitation, or other fields.
3. Health educators shall work with all other educational resources in the area to expand health education services and to create better community understanding through regular channels of instruction.

TRAINING

1. Every nurse or midwife is to be thought of as a public health nurse and to constantly keep aware of the public health aspects of her work.
2. In every place where public health Cooperative work is carried on, the nurses and midwives are to work with the local health persons, whether they be untrained midwives, bandars, or other persons.
3. On every occasion the village women are to be contacted and taught about health and ways of improving health in their localities.
4. Every effort is to be made to recruit girls and women for the public health program for either formal or informal association with the public health Cooperative.

LABORATORY

1. Every laboratory, which is part of the public health Cooperative, is to be considered a public health laboratory and shall concern itself first and foremost with the problems of the community and not those of individual patients except in properly approved instances.

2. At all times the standards of laboratory work are to be the highest possible.
3. All laboratories are to be developed in conjunction with existing laboratories of the Ministry of Health.

All of the foregoing are basic statements of policy and do not specifically indicate the professional aspects inherent in each professional category, but it is assumed that every employee of the Public Health Cooperative will bring to his work his highest professional competence, integrity, and devotion to duty.

APPENDIX II

PUBLIC HEALTH COOPERATIVE ORGANIZATION OF IRAN, MINISTRY OF HEALTH

April 1, 1953 - March 21, 1956

The Public Health Cooperative Organization

The IHCO was established by agreement between the Ministry of Health and the United States Technical Cooperation Mission as the public health department of the Ministry of Health in 1952. In all provinces of Iran, IHCO has regional offices which have provided services and demonstration projects in the fields of malaria control, sanitary engineering, environmental sanitation, preventive medicine, public health nursing, laboratory services, health education, health center construction and operation.

Integration of the IHCO within the Ministry of Health

On March 21, 1956 the administrative integration of the IHCO has been completed by the transfer of complete executive and technical responsibility, property and personnel to the Department of Public Health of the Ministry.

Other than a withdrawal of American counterparts and a change in name of the organization from the IHCO to Department of Public Health of the Ministry of Health, little change is foreseen in the program. The widespread appreciation for the accomplishments of the IHCO at all levels of society attest the efficiency of the organization and staff.

Sanitary Engineering Division

Training has been one of the first considerations in developing a sanitary engineering program. Environmental sanitation and sanitary engineers had no place in the Ministry of Health; now they are a recognized part of the public health program and their position is assured in the Department of Public Health. Six engineers have been sent for one-year's training in public health engineering to the University of Beirut, and nine twelve grade students have received one year sanitation training at the same American University of Beirut. Eleven engineers have been sent to the United States on scholarships. Two engineers are also studying abroad on World Health scholarships.

The Best East Foundation, in cooperation with the Public Health Cooperative Organization, operates the Jalasht Sanitation School. 233 graduates received four months classroom and two months field work.

A regional sanitation program has been established in every province.

of the nation. The accomplishments include the following: 71 deep wells, three concrete reservoirs, two steel elevated tanks, eight distribution systems with 12 kilometers of cement asbestos pipe and 25 kilometers of cast iron pipe. All the designs and plans have been completed. 25 civil engineers received in-service training in design and installation of water distribution systems. 18,000 sanitary mosharah slabs and 800 shallow wells have been installed and 76 show-houses have been completed.

PUBLIC HEALTH COOPERATIVE ORGANIZATION
of the
MINISTRY OF HEALTH

Summary Statistical Report: April 1st 1955 to March 1st 1956

Summary

A) Preventive Medicine:

1. Number of epidemics investigated: 1,350
2. Inoculation and immunization: Diphtheria: 383,619; Typhoid: 190,197; Diphtheria and tetanus: 122,975; Cholera: 7,460,116; Tetanus: 49,942; Pertussis: 26,589
3. Health Clinics: Child clinic attendance: 68,859; Prenatal clinic attendance: 18,663; General clinic attendance: 98,647; Other clinic attendance: 7,630; School children examined: 34,290

B) Laboratory Activities:

Total number of tests: 141,742; Blood serological tests for syphilis: 114,389; Positive: 17,831; Stool examinations for intestinal parasites: 7,175; Positive: 4,127; Widal tests: 1,536; Positive: 580; Wright agglutination tests: 3,116; Positive: 1,814

C) Sanitary Engineering:

Number of deep wells drilled, casings installed and completed: 44; shallow wells completed: 875; Public bathhouses constructed and installed with showers: 59; sanitary latrines constructed: 17,674

D) Malaria Control:

Number of villages sprayed: 50,535; Population protected: 12,800,000

2) Public Health Nursing:

Number of mothers classes: 921; Number of mothers attending: 35,741; Number of classes for local untrained midwives: 352; Number of local midwives trained in the classes: 2,393; Home visits: 77,155

3) Public Health Education and Training:

Number of film shows: 6,694; Spectators: 1,751,753; Number of health lectures: 7,007; Lecturers: 1,569,644; Number of posters, pamphlets, etc. distributed: 469,227; Number of health education classes (for adult, teenagers, school children, conscripts, in service trainees, food handlers, municipality workers and inspectors, rural health education, etc.): 730; Attendance: 61,064

Malaria Control Division 1953-1955

Spraying Operations: A total of 50,535 villages with a population of 12,412,528 have been sprayed. This figure represents repeated spraying of some 18,000 villages, of which 16,000 are under spraying and the remaining 2,000 are freed from malaria and presently under surveillance. A brief study of the operational data reveals the fact that in 20.2% less time. This figure means a considerable saving of funds and a wider protection in a shorter time. Organizational, administrative and technical refinements have led to this significant achievement. 1956 figures show that reorganization of the division has resulted in an ever greater reduction in insecticides per capita.

Surveillance operations started in 1955 and is replacing the spraying operations as malaria is reduced to insignificant levels.

Results: In many areas where malaria prevalence has ranged between 80-100% before the control operations, they are now free of malaria or below the 5-10% level. Observations indicate that the number of infants surviving has increased wherever control operations have been undertaken. An increase in agricultural production and acreage under cultivation has paralleled the expanding malaria program.

Eradication Operations: A 5-year eradication program will commence in 1957. UNICEF has agreed to provide all the equipment procured off-shore valued at 4.5 million dollars. The Iranian Government will provide the operational budget in the amount of 750-1000 million rials.

The Institute of Malariaology

During the past three years, a total of 5,259 villages have been surveyed for malaria. 276,672 persons and 245,900 blood slides were examined.

Anopheles in the surveyed villages were collected and identified. 12,134 scrapings have been obtained from sprayed surfaces to measure the amount and effectiveness of the insecticide. 136 insecticide samples of the Malaria Control Division have been tested, and 24 spray pumps have been tested.

Nine physicians, eight behdars and 86 medical students were trained in malariaology. Malaria employees received a two months course. Two courses in epidemiology of one year's duration were given with four physicians trained in the first course and five physicians attending the second course.

Five entomologists and forty-eight assistant entomologists have received training.

Level classes for surveillance employees have been established in the cities of Tehran, Isfahan, Guilan, Mazandaran and Hermandshah.

Nine laboratory technicians have been trained for regional malaria laboratories.

Preventive Medicine Division

The medical staff consists of five doctors in headquarters and about 40 doctors in the regions. Many of these have received training in the United States of Beirut. Coordination with American staff and periodic headquarter meetings have further developed their abilities.

During the past three years of the IFCO, preventive medical activities have been established in 10 provinces. These regional activities are chiefly concerned with contagious disease control, in particular epidemic investigation, epidemic control and routine immunization programs. Demonstration tuberculosis clinic activities have been developed in one of the regions (Tehran area). Venereal disease control programs have been established in Tehran and two provinces (Tabriz and Isfahan).

During these years some 1,350 epidemics have been investigated. Immunizations have been given for smallpox (7,460,116). Diphtheria

FOIA-10-161X
(a-54)PROJECT PROPOSAL & APPROVAL
Continuation Sheet

A. COOPERATING COUNTRY

B. PROJECT NUMBER

PPA/Cont.

FOREIGN OPERATIONS ADMINISTRATION
UNITED STATES OF AMERICA

C. SCHEDULE

D. SHEET

SHEETS

OF

If there is insufficient space to give adequate information on any PPA Schedule, use this sheet to complete the information, indicating above in Block C the applicable Schedule and indicating below the applicable block number, thus: "Block — Continued."

- 5 -

(500,594) Typhoid (100,197), Tetanus (172,017), and Pertussis (26,589).

Maternal and Child Health Division

The regional MCH clinic facilities have been utilized as teaching centers in public health to give refresher courses to doctors, midwives and other health personnel which will introduce maternal and child health activities into the existing dispensaries of the Ministry of Health and voluntary agencies. Towards this end, the MCH division has prepared an outline for a course in public health in cooperation with other divisions in headquarters. This outline has also been submitted to the Ministry of Education as suggested course in public health for the teacher schools in the provinces.

Public Health Nursing Division

The Nursing Division, with an American nurse advisor in headquarters and in seven of the 10 Ostans where public health activities are established, employs 57 qualified Iranian nurses and midwives. In addition, 115 public health nurse aides have been employed and trained.

Five nurses and midwives have been sent for one year of public health nursing study to the United States, and 17 to the American University of Beirut. The nursing program includes advisory services in the fields of nursing education and hospital nursing administration with a qualified consultant in each field.

The field program of each region consists of prenatal and child health clinics, classes for mothers and courses for untrained village midwives. Each of these activities has expanded to reach many small villages surrounding the regional offices and includes venereal disease, tuberculosis and immunization services.

Public Health Laboratory Division

The Laboratory Division was established in the Public Health Cooperative Organization in 1954. Training classes were started at once.

A total of 12 technicians have completed the one year training course, and four groups of laboratory aides have successfully completed the prescribed six months course. Ostan laboratories have been set up in Shiraz, Isfahan, Meshed, Tehran, Semenshah, Rezaieh, Tabriz and the Caspian Area.

A technical bulletin on health laboratory diagnostic procedures is published each month by the Laboratory Division. This is printed in English and Persian with 100 copies distributed each month.

FOA 16-114
(19-54)PROJECT PROPOSAL & APPROVAL
Continuation Sheet

A. COOPERATING COUNTRY

B. PROJECT NUMBER

PPA/Cent.

FOREIGN OPERATIONS ADMINISTRATION
UNITED STATES OF AMERICA

C. SCHEDULE

D. SHEET

SHEETS

OF

If there is insufficient space to give adequate information on any PPA Schedule, use this sheet to complete the information, indicating above in Block C the applicable Schedule and indicating below the applicable block number, thus: "Block — Continued."

- 5 -

Public Health Education Division

The public health education division has been staffed by 21 professionally trained health educators who were trained in Iran and/or abroad, and who are working in nine out of ten provinces of Iran. An example of the accomplishments are the educational efforts of this division which gained the cooperation and support of the people for our malaria and smallpox control efforts.

Among the many other activities, this division published two public health magazines (one for professional and one for non-professional persons).

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Sept. 14, 1953

TO : U.S. Director of Technical Cooperation for Iran

FROM : Acting Chief, Health Division

SUBJ: Status of TCI Health Program

During the past two years a great deal of progress has been made in establishing a sound public health program for Iran. This program, in my opinion, is only half of the work that should be carried out in developing an integrated total health program for this country.

During late 1951 and early 1952, a rural health program was initiated under the auspices of TCI. This program was essentially an American program and it was developed with the idea of a three-prong drive into the rural communities, namely, a team working within the framework under a regional director in agriculture, education and health. In a way this type of operation sociologically is extremely important but due to the organization of the Iranian government, was not a practical approach to the development of a health program. There is so much to do here in Iran that it is difficult at all times to have a three-way approach in the various mentioned fields in every instance, many areas in Iran require the development of public health ahead of the development of education, or in other areas, agriculture may be of paramount importance whereas education and health may be fairly well established. Nevertheless, the regional approach decentralized TCI activities and had a beneficial effect upon the various localities. The health program was not visualized until some time during April or May of 1952. Prior to the setting of this program, an impact project in the field of malaria control was undertaken and a large amount of money was placed at the disposal of the Ministry of Health with few TCI controls. This malaria program was actually a pick-up program which was started by the Iranian government under the auspices of a WHO advisory team. Due to the lack of Iranian government funds, it was imperative that joint IV aid in this program in order not to lose the effect of the first two years of malaria control operations.

It is to be noted that the Iranian government protected 6,000 villages from malaria prior to this time and before TCI began to participate. During 1952 12,000 villages with a total population of over 3,000,000 people were protected and it is anticipated that during the completion of the 1953 program 16,000 villages will have been sprayed and over 4,000,000 people protected. Two points to be emphasized in the malaria program were:

- (1) That emergency shipments of DDT arrived by airplane and the malaria program was allowed to be continued because of these shipments. This greatly aided the ICI program politically in Iran.
- (2) In many areas the agriculture labor force was increased 400% merely because malaria was eradicated. This latter fact is now being felt in the economy of Iran.

Coming back to the establishment of a public health program policy during the spring of 1952, it may be said that a unique system of public health was visualized peculiar to Iran. This system was essentially a rural public health program and was conceived to establish a pattern of operations in which public health would flourish under Iranian government subsidy. It was never intended that the ICI health program could underwrite an entire operating program in health in Iran, but that administrative and demonstration schemes would be put into effect on a country-wide basis in strategic locations which could be used as a pattern for the Iranians to further their program. Essentially this program was one of developing major health centers in five populous areas, namely, Mazrshijan, Qazvin, Isfahan, Shiraz and Ahwaz. Subsidiary work was to be done in other areas such as Tehran, Mashhad as the program matured. Health centers were to be developed in major cities in the above areas. These health centers would be model units and large enough to serve as base operations for headquarters, with subsidiary health centers strategically placed within their respective areas.

It was the policy set by Dr. Palmquist that American designed health centers be constructed in principal cities. This was concurred to by Dr. Verzile Nye upon his arrival in Iran in May, 1952. There is some question as to whether this was the correct approach to the proposal of getting the health work completed. The other alternative was the development of these health centers by Iranian building standards and perhaps the renting of suitable building space in order to get operational units underway. The decision for American type health centers was made and architectural arrangements were made by way of the hiring of the firm of Hitchcock, Whitney, Kanero, Severud and Associates of New York. Dr. Loczi arrived in February, 1953 and immediately initiated an Architectural Facilities Section within the Health Division. Subsidiary health centers were built during 1952, of which the foremost was at the village of Bastgera, Isfahan. This health center was entirely designed by Iranian regional technicians with the guidance of the health team in Isfahan. This health center has proved its worth many times over and is functioning in a very effective manner at this time.

Perhaps the health program in regard to health center operations would have been further along had this initial type of construction been initiated rather than the development of American type health centers. It must be pointed out however, that the soundness of American type architecture, although slow in getting underway, will have a lasting benefit to Iran. Along this same line the establishment of an architectural facilities operation within the health program ramifies into other ICI divisions and has not confined itself entirely to health projects. For longrange development the sound planning of the American type health center and the creation of the architectural facilities operation has been well worthwhile; direct effect on the health program. This decision has delayed public health work.

During the spring of 1952, in addition to creating the stationary public health establishment for demonstration and training, the concept of small mobile units was initiated. These units were to work out of the health centers. This operation would greatly extend the public health work within a given community. It was found that health institutions of the stationary type were not available for any villages outside of a radius of 10 kilometers and that in order to reach all of the villages within a given community mobility of health personnel was a necessity. These units would be comparable to the early days in the United States and of the general practitioner and the country health officer with his vehicle. In other words, the small mobile health units in addition to the public health projects of such a program, namely, immunizations, public health education, maternal and child health, and school health work. As a consequence, a limited supply of therapeutic materials were incorporated in the small mobile health units. A question has been raised in many instances that mobile health programs are extremely costly in relationship to the amount of population served. This is essentially correct, but it must be realized that in order to cover the country of Iran and to reach isolated village communities, it is imperative that a mobile health program be put into effect. Iran is not economically able at this time, nor in the foreseeable future, to develop stationary health institutions in all the scattered communities, and although the amount of patient and population load that a mobile health unit can effectively serve is reduced, at least all parts of a given locale will, at one time or another, be reached by the small mobile health program.

A word may be said about the use of therapeutic materials in the small mobile health units. It must be realized that during 1952 and 1953, no therapeutic equipment and supplies were imported into Iran; that the medical services of the Ministry of Health rendered to the people was practically non-existent except for the payment of salaries

of their personnel. As a consequence, in order for the public health program to be accepted by the population, limited therapeutics had to be available.

Another policy decision was made in the health program which may have effected the course of implementing the public health activities and this was to procure truck chassis and develop the small mobile health unit body with Iranian facilities, thereby giving work to Iranian industry or to order the finished mobile unit from the United States. It was decided that the first policy should be adopted, namely, that the truck chassis would be procured from the United States and the body work would be completed in Iran. This, in addition to the above noted health center delay, increased the delay in implementing the health work. However, it did have the effect of reducing expenditures. For example, a small mobile health unit complete delivered from America amounted to approximately \$7,000. This same unit developed by local industry amounted to \$4,000, a saving of \$3,000 per unit. Thirty-five four-wheel drive jeep chassis were brought in to Iran during the fall of 1952. Designs were made within the Sanitary Engineering branch of the Health Division and work contracted for. Six mobile units were made at Isfahan and Shiraz and were in the field during late 1952. It is to be noted that the majority of the small mobile health units are, at this time, now becoming available.

Perhaps the most noteworthy development in the field of public health for Iran was the development of the Public Health Cooperative Organization. This organization was patterned after the "Service" of South America and, prior to its institution, Dr. Eugene Campbell arrived during the summer of 1952 for three months, and laid the groundwork in many of the essential phases of this organization. It was finally brought into existence on April 1, 1953 with reservations in regard to the efficiency of this organization both within the Health Division and within ICI. Fortunately, the Health Division was able to effectively manage this program and it has served as a training ground in public health administration for most of the Ministry of Health employees. It has served also to incorporate the ICI-Iranian health personnel into the Ministry of Health. Overtly, the Public Health Cooperative Organization has taken over the entire duties and enlarged upon these duties of the Division of Preventive Medicine of the Ministry of Health. The Ministry of Health still maintains an organization on paper as a Division of Preventive Medicine, but the activities which are not included in the Public Health Cooperative Organization should be the taking over of the complete functions of the Division of Preventive Medicine of the Ministry of Health, and should be used by the Ministry of Health as its Division of Preventive Medicine. In all probability, this would include consolidation of personnel with possible some relations of unqualified Ministry personnel.

Training over the past two years in public health has been extended by ICI. Approximately 260 sanitarian-aides have been fully trained and are participating in the health program work at this time. Approximately 70 health aides have been trained and are being used in the various area offices. In addition to the above, key Iranian counterparts have received a minimum of one and one-half years of apprentice training under American technicians. In many cases the work-load in the health program has been turned over to Iranian employees qualified to handle their various phases of activities, particularly in the field of public health education and sanitary engineering. Mr. Amouzger, American trained sanitary engineer, is now in charge of the Sanitary Engineering Division of the Public Health Cooperative Organization. Mr. Moarefi, American trained technician in Public Health Education, is in charge of that division of the Public Health Cooperative Organization. Many regional sanitarians are now carrying the load of the regional work. Approximately 30 people have been sent to America for training in public health, and during the latter part of 1952, a group of midwives, sanitarians and health-aides were sent to Beirut for undergraduate public health training.

Another contribution in training has been the administrative education that has been given to Ministry of Health employees within the Public Health Cooperative Organization. The administrative procedures have been American adapted to the Iranian standards and a hard-hitting administrative organization now exists. The administrative organization includes financial methods which are a great improvement over the existing Iranian financial systems.

The department of the Sanitary Engineering Division first within the Health Division of ICI and second, the transference of the Sanitary Engineering Division to the Public Health Cooperative Organization, has made a great stride in the establishment of a long needed Sanitary Engineering Department for the Ministry of Health. This was a valuable service rendered by ICI as it created facilities for actual handling of health and sanitation problems that were not available prior to advent of joint four activities. This division is well entrenched at the present time in the Public Health Cooperative Organization and is accepted by the Ministry of Health as one of its essential components. Under the Sanitary Engineering Division, the deep well and distribution system program has been carried out. Environmental sanitation work is under its auspices. The Health Facilities Architectural Branch is also part of this large Sanitary Engineering Division. Malaria has been controlled from staff members of the Sanitary Engineering Division and a malaria control branch has been created in this division of Sanitary Engineering.

The health program, in addition to the above, has under its auspices a Deep Well Distribution Program which has the objective of potable water supplies for villages under 20,000 population. There are some 76 deep wells drilled, or are being drilled at this time, for this program. Approximately 10 distribution systems have been designed. Large sums have been contributed by various communities in order to implement this program.

The training of laboratory technicians has been carried out and is continuing to be carried out with the Pasteur Institute and the Hazi Institute. These technicians are being trained for laboratory work within the health centers and will be integrated within a countrywide public laboratory system in Iran. The Pasteur Institute is being reinforced by procurement of offshore laboratory equipment amounting to approximately \$125,000, and the Hazi Institute is being aided by additional U.S. laboratory equipment purchases.

It is to be noted that the health program is attempting to create regional laboratories which would be subsidiary to a national operated laboratory in Tehran. The Pasteur Institute performs some functions which would be ascribed to a national public health laboratory. Due to the limitations of the Pasteur Institute it is unable to assume all of the functions necessary for a complete public health laboratory service. The health and sanitation program is, therefore, considering in 1954 under special economic assistance, or possibly 1955 either by American or Iranian government aid, developing facilities which could be called a national public health laboratory in Tehran. Aid has been extended during 1952 and 1953 to small laboratories in Isfahan, Tabriz, Mahabbar and Shiraz. These laboratories are the nucleus for other public health laboratories. Special note should be made regarding a laboratory at Shiraz; a Trachoma Research facility was developed within the Shiraz Medical School. This laboratory was for the study of virus with particular emphasis upon trachoma. This enterprise could be developed into a very striking example of technical work in the Near East as this laboratory is the only virological laboratory east of Cairo.

Three mobile health units have been brought into Iran and have been used over the past 15 months for various types of survey work. These units are the large mobile type and include a complete living unit. An example of their work reveals that worm infestation in the Caspian in various villages may reach the portions of 96%; that syphilis, which has been reported to be as high as 40% of the population, actually has an instance of between 4-7%. Many other uses of these large mobile units have been carried out. An example of this may be the dispatching of

the large mobile unit from the Caspian to the village of Farouc which suffered a severe earthquake during February, 1955. It might also be mentioned that a medical team was sent to the area and aided materially in the welfare of the stricken community.

Operating out of various regional offices, a School Health Program has been carried out in Isfahan, Shiraz, Tabriz and the Caspian, and other regions are incorporating a school health program in their public health activities.

A large mobile X-ray unit was brought into Iran, supervised by an American technician. This unit, similar to the large mobile health units noted above, was for the purpose of tuberculosis survey. It has been reported in Iran that tuberculosis was extremely prevalent, particularly in certain industrialized areas. The work of this unit has not conformed to the idea that tuberculosis is a prevalent and serious disease entity of the Iranian population.

Funds for the health and sanitation program of ICI were used for large sanitation projects, such as aid to the Tehran Water System project, and aid to the Near East Foundation in regard to potable water supplies for the village of Bizful in southern Iran.

The above accomplishments of the health program should be labeled as Phase I of ICI. This has included an impact program in Iran's most prevalent disease - malaria, and the training and establishment of a health program pattern for Iranians effective at the community level. In addition, Phase I includes the development of a joint cooperative enterprise envisioned as a training ground in demonstration.

It is my opinion that during the next 12 months to 2 years, the following health policy should be implemented in the health programs: First, the development of an integrated total health program rather than one emphasizing only public health. Second, the gradual elimination of American advisors and operators of the Public Health Cooperative Organization in order that this latter organization may become entirely Iranian. The released Americans can be used in other phases of health work in Iran. Third, the development of a Medical Services Cooperative Organization to become the Division of Therapeutics and Hospitals of the Ministry of Health.

If additional economic aid becomes available for Iran for use in the development of a health program, it is highly desirable that a Medical Services Cooperative be established. It is estimated that the creation of this institution would cost approximately \$6,000,000. How-

ever, a reduced program can probably be effected for \$4,000,000. The Medical Services Cooperative would be responsible for all therapeutics and would include the management of all Iranian government hospitals under the Ministry of Health. Aid would necessarily have to be furnished on a training and demonstration basis and this would consist of the refurbishing of five strategically located hospitals. Operating expenditure costs would have to be included as personnel, salaries and pensions, would have to be brought about. It is anticipated that the Iranian government would pick up the operation costs of the Medical Services Cooperative following economic aid by the American government during 1954-1955. Many of the Americans that are now working in the Public Health Cooperative organization could be used in the Medical Services Cooperative turning over, as noted above, the majority of the work to Iranian trained technicians. As the maturity of the Medical Services Cooperative develop, it would include the entire functions of the Therapeutic Division of the Ministry of Health and an Administrative Division could be established within the Ministry of Health, drawing administrative personnel from both of the Cooperatives, thereby creating within the Ministry of Health three major divisions, namely, Division of Medical Services, Division of Administration, and Division of Public Health. Other minor operations as work progressed would become divisions. Of these are could mention Public Health Education, Public Health Information, Division of Laboratories, etcetera. This latter development of the health program for Iran can be labeled Phase II, and more complete details could be worked out developing both the policy of AIC and the direction of additional American Aid.

Mention should be made of the creation of a National Institute of Public Health within the framework of the University of Tehran School of Medicine. This institution would be primarily training in the field of public health and would handle students both of undergraduate, graduate and postgraduate medical scholars. Included in this Institute of Public Health at the University of Tehran, would be a Department of Sanitary Engineering which would supply source material and personnel for the operation of the sanitation program under the Ministry of Health. It is noted that at the present time all public health work, other than what has been initiated under the guidance of AIC, must be taken abroad and that it is highly desirable that public health education be taught within the confines of Iran. It is foolish to think in terms of a complete public health unit when physicians are trained in poorly equipped medical schools. In Phase II of the health and sanitation program, the AIC should consider aid to the University of Tehran Medical School; not only physical structures, such as classrooms, departmental space, auditoriums and teaching laboratories should be constructed, but those buildings which are near completion should be finished with economic aid. This would permit a more judicious handling of students and permit better training.

It is to be emphasized that American aid, both technically and economically, should be given to Iran to further its health program and that this program should not be based entirely upon the concept of public health, but as an integrated health program for the people of Iran. It is not desirable, nor feasible, that this program of American aid be viewed with the idea that it would underwrite the sole operating cost of the health work, but that it would establish a pattern in order that the Iranian government funds could be effectively utilized in the field of health for the people in the future.

/s/

Dr. Harry Y. Spence

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| FOA-10-IHX (F. 54) PPA/Cont. | PROJECT PROPOSAL & APPROVAL Continuation Sheet | A. COOPERATING COUNTRY | B. PROJECT NUMBER |
| | FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | C. SCHEDULE | D. SHEET OF SHEETS |

If there is insufficient space to give adequate information on any PPA Schedule, use this sheet to complete the information, indicating above in Block C the applicable Schedule and indicating below the applicable block number, thus: "Block — Continued."

PROJECT NO. 50

NAVIEN

1. Project No. 50 was developed to put into action the work established in the Public Health Cooperative Organization and to provide the actual activities to be carried out in the field of public health and sanitation excluding malaria and schistosomiasis. All of the work now being carried out in the fields of environmental sanitation will appear in a separate report.

The main object of these activities as provided under this project was to provide a base for fundamental public health operations throughout Iran covering the various facets of public health, providing demonstration and training for persons working in this field and to develop a public health consciousness among the people of Iran and particularly in the organized governmental agencies. Specifically provided for in the project are the particular areas of work. These are: health center construction, the status of which will be discussed in a separate review report; small mobile health units; public health education, to be discussed separately; public health statistics; health center operation and operation of large mobile health units, sanitary engineering, to be discussed separately; Health Visitor and Health Visitor-aid training; Shiraz School of Nursing; Trachoma Control through the Trachoma Laboratory in Shiraz; and mobile Chest X-ray activities. To accomplish these ends these activities and their subdivisions are now being carried out in 7 regions. Additional activities include: school health activities; the development of maternal and child health services; slowfery training services; a venereal disease campaign among the Imperial Guardaries; the development of epidemic disease control units; the development of a new modern disease reporting system, and the operation of public health laboratories, developed out of these activities there are at present operating 2 health centers in Tabriz area, 3 health centers in Caspian area, 2 health centers in Tehran area, 1 health center in Isfahan area, and soon there will be 2 operating in Shiraz area, 1 additional in Tehran area, a total of 11 health centers by September 30, 1953. To date there are 36 health visitors and aides working in the field and 40 more are undergoing training. Similar progress has taken place in the other activities listed above. As one can see from the many activities now being carried on from the regional offices of the U.S.C.O., a considerable measure of success has been experienced in the development of public health consciousness in Iran. In all cases liaison between the regional offices of the U.S.C.O. and the offices of the Ministry of Health have been very

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| FOA-10-1HX (8-54) | PROJECT PROPOSAL & APPROVAL Continuation Sheet | A. COOPERATING COUNTRY | B. PROJECT NUMBER |
| | | C. SCHEDULE | D. SHEET OF SHEETS |
| PPA/Cont. | FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | | |

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- 2 -

good in the development of these projects and programs.

One can say then that public health consciousness as well as activities at present are beginning to be appreciated in the majority of the large centers of Iran.

2. To date Project No. 50 is being carried out in 7 regional areas namely Tabriz, Babol, Tehran, Isfahan, Kermanshah, Shiraz and Meshed. This does not mean that all of the activities listed above are being carried on in all of these regions, though the majority of them are. Trachoma laboratory operations are confined to Shiraz, the large health mobiles have been serving Babol, Tabriz, and Tehran areas. School health and maternal and child health services are being conducted in all of these regions as are village midwifery training programs. Health visitors have been trained in each of these regions and new classes are going on in Tabriz and Isfahan. Small mobile unit operation has been going on or will begin very shortly in all these regions except the Caspian region.

The operations in Kermanshah and Meshed have just begun. To date the activities in these areas have confined themselves to school health, maternal and child health, and the training of health visitors. Small mobile units will be operating very shortly in both areas. Health centers have been planned for these areas but are not in operation yet.

The Kezsiyeh area is covered by the Tabriz operation; the Kerman area has not yet begun operations in this project but will very shortly. The Ahwaz area has already had a complete venereal disease survey and treatment of the geridans of that area. Upon completion, one of the epidemic disease units will go to Ahwaz as well as the large health mobile which is being transferred from Tabriz. More formal operations under this project have not yet begun in Ahwaz.

3. One of the greatest difficulties which has been encountered has been the shortage of trained American technicians to staff the regional operations of the U.S.C.S. to give the necessary guidance and direction to the Iranians who have been recruited for this type of work. The greatest shortage has been of public health physicians. The shortages of American personnel have prevented the beginning of operations in Kerman and Ahwaz because such operations require, at least in their early stages, the constant direction and supervision of American technicians. Certain activities have been held up for a considerable time because of the lack of supplies arriving at the proper time such as the

- 3 -

Trachoma laboratory in Shiraz which has had considerable difficulty in getting all the supplies which have been ordered for it. The small number of vehicles, particularly those to be used for film shootings, has at all times made the field operations limited. Inevitably, with more vehicles at our disposal it will be possible to carry out more work. One of the serious difficulties with which we are constantly faced is the lack of dedicated, interested young Iranians willing to learn new techniques and new ideas to staff our programs. This has been particularly true in the fields of nature, such as snow, rising streams, muddy roads, and so forth, have often forced our programs to slow down or stop in particular areas at particular times. In some instances, particularly with references to the Mandoat Health Center, lack of firm cooperation between the participating parties postponed the opening of the center until a date much later than expected.

In general it is only fair to say that any difficulties we have experienced so far have been principally those of lack of personnel both American and Iranian and shortage of vehicles to carry out the work.

4. All of the activities under this project fit distinctly into the category of training and demonstration. Each of the activities which has been mentioned is for the purpose of teaching Iranian governmental agencies as well as local people how public health can be carried out as well as the best methods to use in doing so. Regular courses for the training of health visitors have gone on and are going on regularly. In addition, each of the persons who has worked with an American technician has received informal training on the job from his American counterpart or advisor. By this method most of the professional staff including doctors, sanitary engineers, nurses, and laboratory personnel have become acquainted with roles that place in a total public health program. In addition to those already mentioned, a course for trachoma workers was carried out in Shiraz.

5. To date \$340,023.77 have been expended or obligated for purchase in the U.S. under this project including those items for sanitary engineering. These supplies include X-ray equipment for the X-ray units, books and periodicals, laboratory equipment, major equipment and supplies for health centers, and audio-visual equipment. Of the supplies which have been ordered a very small portion has arrived. In fact, only those things which were sent by air freight, such as the X-ray tubes and cases, have arrived.

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6. As of July 15, Rs. 2,81,448.35 have been expended on a portion of Project No. 50 excluding sanitary engineering. This amounts to about 6% of the budget allocated for this purpose.

One of the chief reasons for the slowness of the spending of the money allocated has been in the development of the facilities in which the expenditures will take place. It is strongly felt that expenditures will jump considerably within the next few weeks. It is further estimated that the money available for the project should be able to carry it until December or January even though the ending date for the calculated expenditures is September 30. If the estimated rate of expenditure is more closely approached, as is expected, the ending date of September 30 may be more of a real possibility.

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APPENDIX V
HOSPITAL AND MEDICAL CARE ADMINISTRATION
SECTION OF PROJECT 72

I - Historical Perspectives

A. situation of activity prior to initiation of the project.

Iraq had developed a system of free hospital and out-patient dispensaries for the purpose of serving the people of the country operated by the National Ministry of Health. Physicians having private practices of their own are employed for medical diagnosis and treatment of the people on a part time basis. The hospitals could offer no more than an extremely limited domiciliary type of service which was and is recognized to be far below modern standards. A slightly better standard of hospital and dispensary service had been developed for many groups protected by medical insurance such as those working for the Social Insurance Organization, Railroad, Plan Organization, Banks, etc. On a plane with these hospitals are those of the University and other non-profit voluntary agencies such as Red Lion & Sun and the Imperial Foundation. A third but not yet ideal type of service could be purchased through privately owned hospitals and clinics.

Since 1952 public health has made great strides, providing and developing health services in the country and a number of the few well-trained individuals working for hospital and dispensaries were absorbed into the field of public health causing hospitals and dispensaries to deteriorate even further. In 1955 the Minister of Health requested an advisor in Hospital and Medical Care Administration to help improve the situation; to guide the Plan Organization program of planning and financing hospital and health center construction and to advise in the area of improving health.

B. Relation of situation to economic and social needs of the country.

The economic and social implications of the existing hospital and dispensary situation is obvious when it is observed that there is no dynamic program for diagnosis, treatment, and rehabilitation of existing diseases, nor is there any provision for analyzing needs or developing research in curative medicine.

For a large mass of the population the hospital is still a place of last resort to which one goes only in extreme suffering or to die. Changing this concept is a gradual process and can only come about as public education and hospital services improve. A large number seek care and prolong their stay unduly merely in order to obtain food and shelter; no coordination is made between health and welfare services.

The hospitals are generally over-crowded and present a public health hazard in the lack of basic facilities for sanitation, isolation, etc. There are frequent known cross infections and the practice of asepsis is usually not observed as a result of lack of trained personnel and budget limitations. Efforts in organization and new administrative procedures have been undertaken to ameliorate the situation as well as advance services.

C. Government of Iran interest

1. Country official effort consists of requesting advise and the development of a Division of Hospital and Medical Care Administration.

2. Private citizen effort is directed mainly to the private development of hospital and clinic resources to meet needs of specific practicing physicians. A limited but significant number of distinguished and wealthy persons are philanthropic enough to contribute funds for hospital construction but not for operating budget. Public opinion is not aroused to the need of the institutions enough to cause any concerted widespread action. There has been publicized expressions of discontent with the service available from practicing physicians and from hospitals so that there is a beginning recognition of the right of a citizen to demand and obtain his rights to at least life saving measures.

II - Activity Specific Objectives -

15 point program attached -

III - Economic, Social and Geographical Factors -

The program is developing for the nation but by reasons of the Division's direct responsibility for the hospitals in Tehran-Osten more supervision is given in this geographic area; this is also due to proximity, difficulty in travel, etc., as well as desire for HQ. personnel to also participate in demonstration-teaching units.

IV - Chronologic: 1 description of activity implementation

A. work accomplished and how accomplished

1. Operational -

Program did not exist during the operational period from 1952 to 1956, however a certain amount of operation is presently expected from the Ministry of Health Government of Iran and some actual directions

and administrative decisions, particularly regarding university teaching program, construction equipment, and organization, are still made. With the increasing number of G.O.I. staff and their improving capacity, more of this activity takes place through Iranian personnel than formerly.

2. Advisory -

Brief survey of situation -

15 point program attached and the selection by the Minister of Health of first "survey of existing needs" and last "training" to receive immediate attention.

Plan Organization had a construction program already roughly outlined. This although known to have been inadequately planned was used as a basic guide for planning and advice given regarding construction details of project which had begun several years before and for various reasons had not been completed. Integration meetings are held regularly with the F.O. and area consulting engineers assigned construction projects to develop the program. This will continue for at least two years under the present seven year plan and for an estimated additional 5 years as another developmental program is enacted.

A total of 74 projects have been reviewed in some phase; 16 have had difficulties; 1 is in preliminary program study; 5 in progress development stage; 24 are in phase 1 preliminary drawings; 3 have final working drawings; 6 are under construction; 3 have been cancelled and action on 3 has been postponed.

These projects consist of: 2 large health centers; 5-90 to 120 beds hospitals; 3 medium health center; 18-25 to 40 bed hospitals and health center combined; 6 rural dispensaries and health center combined; 21 rural dispensaries; 2 T&C. sanitarium; 1 mental hospital.

Over the previous two years and continuing at present considerable time has been required by the Firuzabadi Hospital, a developing medical center close to Tehran. A building completed by USOM/1 but inoperable because the contractor did not install the plumbing, electricity, and waste disposal system properly, has been restudied and the mistakes are being corrected. A maternity hospital building was given consultation regarding location of rooms and equipment but the hospital donor required the contractor to follow her own ideas. The overall program and operation has received considerable attention and much more will be needed before an adequate facility and patient care service

will result. Two demonstration units were completed for the use of the student of Reza Shah Kabir Nursing School operating by WHO nursing education team. The WHO contract required the use of Firuzabadi Hospital for clinical education. The objective here was to develop the demonstration units to show that there was considerable that could be done with existing facilities and that a good patient care service could result.

The development of the Division of Hospital and Medical Care Administration in the Ministry of Health to administer a program of modern hospital and health center development, consultation and establishment of standards.

3. A. Training in Medical Care Administration

In October 1956, complying with the Minister's request that priority be given training, a class was organized in the University of Tehran - Faculty of Law, Institute for Administrative Affairs, and a course begun in Institutional Management with Special Reference to Hospital and Related Health Facilities. In that first year there were 117 registrants; 68 completed the course: 13 were physicians, 11 had other degrees, 27 were graduate midwives, 3 graduate nurse-midwives, and 14 were without university degrees.

The second year, of the above 68, twenty-three were accepted to continue their studies, and of these 23 completed the course: 8 were physicians, 9 had other degrees, 5 were midwives, one a nurse. These 22 students completed and advanced seminar course on community health survey started that second year.

The following year 30 registered and 23 completed the course; 6 were physicians, 12 had other degrees, 4 were midwives, and one was a nurse-midwife.

During the current year 20 students started the basic course in January. 11 were physicians, 5 had other degrees, 3 were midwives, one a nurse; and in April the students from the previous year's class joined them for the advanced seminar work making a class of 44.

Until this year all students have been actively engaged in some administrative aspects of hospital or related facility operation; four of the current year's group have a stipend for full time study and planned experience and they will be employed in the Ministry Hospitals when they complete the course.

3. B. Medical Education

Tehran Faculty of Medicine is developing a more adequate curriculum, selecting students carefully to decrease class load, strengthening teaching content to meet the modern physicians needs, developing P.G. specialties and in many other ways generally improving.

The Shiraz Faculty of Medicine is doing the same. In addition they are integrating with the Shiraz Medical Center including Nemazee Hospital and its staff for strengthening medical education and clinical experience. This in turn challenges the Shiraz Medical Center to adjust to existing situations and national as well as local needs. The Shiraz Medical Center comprises a base center as well as a regional demonstration of medical and para medical service integrated with public health activities of a community and has stimulated considerable overall community development.

4 - Construction -

The Ministry of Health facilities built during this period was independent of the project and through the aegis of the "Office of Emergency Aid Projects".

V - Evaluation -

The needs in this area are not yet sufficiently known making it impossible to draw a correct analyses.

However it is felt that this is a fundamental and continuously developing program which should be evaluated and changed to meet constantly changing needs - and the advisory service could be discontinued in approximately 3-5 years.

The program applied to an existing national organization fraught with innumerable organizational and operational difficulties is one necessarily carefully designed to change the existing institutions and organizations gradually as the people in the country can gain more understanding of their rights, needs, and modern medical and administrative concepts.

The ministers have come to accept that their control organization for curative medicine (or public assistance as it is called here as in France) and those of the provincial units and those set up by the Public Health Cooperative Organization now need to function as integrated units with trained personnel assigned. Efforts are underway to change the basic

organization to permit this integration, and in some of the Ostans (provinces) efforts are being made forward more integration.

A better concept of administrative principles and teamwork will probably only begin to be recognized by the people responsible as the enlarged project 214 ends.

It is part of the existing concept that new and improved physical environment is extremely important in the scheme of things, not only as a material and capital gain but also an important psychological attitude now associated with run down, inadequate, and outdated facilities.

Since 072 has been divided into various component parts of a National Health Program. The newly revised projects will not only reflect more specifically assistance on hospital and medical care aspects but more clearly delineate enumerated areas with their fields for demonstration purposes.

Appendix VI

EVALUATION OF NURSING ACTIVITIES UNDER PROJECT 072

By November 1954 the Public Health nursing program had been in operation for about two years with a limited qualified Iranian staff. The program was active in seven Ostans with American nurses assigned to five of the seven. In addition there was an American Chief nurse in the national Headquarters and two assigned to the Nemazee Hospital and School of Nursing in Shiraz, and one assigned to the Parvin School of Nursing in Meshe. American and Iranian nurses shared responsibility for operational control because of the inadequate experience and training of Iranian Personnel. The public health nursing program at this time operated under the Preventive Medicine Division in the Public Health Cooperative of the Ministry of Health. The program consisted of: infant and prenatal clinics; immunization clinics; school health; classes for untrained midwives and mothers; home visits; milk distribution; training programs for public health nurse aides.

The Nemazee School of Nursing opened in the fall of 1954 with 10 students and the hospital opened in the Spring of 1955. An American nurse, under project 072, directed the school of nursing until 1958 when this position was assumed by Iran Foundation. Hospital nursing service is still being operated by an American nurse but was transferred to project 214 upon the termination of this project.

The nursing program has reached large numbers of people and has provided a service that was previously unavailable to the people of Iran. It has provided them with a fuller and more healthful life that has made them more productive through the reduction of the maternal and infant death rate and communicable diseases. It has also helped to emancipate women in the country by providing them with education that has taught them the value of caring for their own health as well as the health of their children. prior to the public health nursing program women would not submit to physical examination or immunizations. Now the demand has grown to the point that the staff is unable to handle everyone. The training of public health nurse aides has pointed a new opportunity for young women. An additional aid that this program has provided has been the boost it has given to the status of nursing and the interest that has been created among many young women in the profession.

The Government takes an active interest in the nursing program and is anxious to prepare more young women in the profession in order to meet the growing demands of the people as well as the

medical profession. In an effort to upgrade the nursing profession, the Tehran University Midwifery School was closed in 1951, and made a post graduate course to nursing in 1955. They have encouraged the upgrading and opening of more schools of nursing and preparing auxiliary nursing personnel in order to staff expanding health services and provide hospital nursing service.

The interest of private citizens is continually growing and there is a strong sense of appreciation developing for the prevention of disease and the part that nursing plays. Some villages have offered facilities for a health clinic but, it is still felt, generally, that the government should provide all health services.

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The specific nursing objectives of this project have been:

1. To recruit and prepare nurses, midwives and public health nurse aides for the present and expanding program in public health.
2. To prepare a public health nursing consultant on a national basis.
3. To provide in-service training for the public health nursing staff.
4. To prepare a public health nursing manual.
5. To upgrade nursing education through surveying the present schools of nursing to determine qualifications for accreditation.
6. To gain ministry approval of a three and two year curricula for schools of nursing.
7. To gain enactment of a Nursing Practice Act.
8. To open and staff the Farvin School of Nursing in Meshed.
9. To conduct a nation-wide recruitment program for schools of nursing.
10. To establish a course for faculty members of schools of nursing.

11. To prepare job descriptions.
12. To conduct in-service courses for hospital nursing personnel.
13. To survey hospitals for developing standards.
14. To upgrade and provide clinical experience for student nurses; prepare educational material for nurses.
15. To provide participant education in nursing in the U.S. and Lebanon.

The activity sites have been selected mainly in the Ostar capital cities in order to provide adequate communications and provide service to the greatest number of people with a limited staff and transportation facilities. Villages in the vicinity of the capital cities which are easily accessible are provided services on a limited basis. The problem of housing facilities, isolation from family, and other cultural aspects make it extremely difficult to provide nursing service to remote areas.

In 1955 nursing became a separate division in the Department of Public Health. There was a growing need for more and better qualified nursing personnel. More demands were made on the nursing division to develop training courses and improve the field of nursing education. Demands were also made to improve the conditions in hospitals and general nursing services. In recognition of these demands the nursing division was reorganized to provide three nurse consultants on a national level under the direction of the chief nurse. These positions were in nursing education, hospital nursing service and, public health nursing. Public health nursing activities were extended to all ten Ostans in the country with American nurses providing advisory service in seven Ostans. To provide in-service education for the staff, biannual nursing conferences are held in Tehran. A national nursing record system was devised and adopted in all the Ostans as well as a standard uniform for public health nurses and aids. A group of 12 young girls were given a one year course to prepare them as public health nurse aids for the program in Meshed. Another group of 43 girls completed a similar course given in cooperation with the Red Cross and Sur, and UNICEF. All existing schools of nursing have been surveyed and a standard curriculum proposed for professional and auxiliary schools of nursing.

In March 1956 when IHCO integrated with the Ministry of Health, the American nurses stepped out of operations and became advisors to their Iranian nurse counterparts. This change had some upward effects on the program. There was reduction in working hours as well as salary

which resulted in a loss of personnel and a slowing down of activities. In addition, it has become increasingly difficult to recruit new staff members because of lack of security and more attractive salaries outside government services.

In the fall of 1956 the First Grand Nursing Conference was held in Tehran. With the assistance of foreign technical experts a number of recommendations were made for the future of nursing in Iran. These recommendations are gradually being put into effect. In May 1958 the High Council of Education approved a constitution establishing three year professional schools of nursing with twelfth grade entrance requirement and two year practical schools with 9th grade entrance requirements. The practical schools offer a choice in the second year to prepare as a hospital nurse, a rural midwife or a public health nurse aide. At the present time there are 6 professional schools with an approximate enrollment of 400 students. There are 7 auxiliary schools with about 225 students. Also in 1958 a central curriculum committee was organized to establish a standard curriculum for all schools of nursing and to prepare a curriculum guide. This work should be completed by late 1959.

The Farvin School of Nursing in Meshed which existed for many years as a two year school and has provided with an American nurse advisor from 1953 to the Spring of 1958 will be closed this year. A new three year professional school of nursing called Jorjani opened in October 1958 with 20 students. The school is being operated by the Ministry of Health and is being assisted by 3 American nurse education advisors. The school was established through the cooperative efforts of the Shrine Organization (22,500 sq. meters of land,) USOM-Iran (13,250,000 Rls. for construction, 76,000 Rls. for central heating and equipment,) and the Ministry of Health (1,200,000 Rls. for final completion).

The Nemazee School of Nursing in Shiraz now has 43 students enrolled and has graduated 20 students to date. The position of nurse education advisor to this school was eliminated in early 1958 to provide a third position for the Jorjani school in Meshed. The Nemazee hospital now operates 100 beds and continues to have the service of USOM hospital nursing service director.

The first nation wide recruitment program for schools of nursing was initiated in May 1957. This is now a yearly project which gains in enthusiasm and continually improves each year.

In July, 1957 an American nurse advisor was assigned to work with the Iranian public health nursing consultant on a national level. Although this position was only filled for one year, all ten Ostans in the country were visited

and given assistance in the improvement of their program. In November 1957 a 5 day workshop was held in Tehran to prepare a public health nursing manual. This manual is still under preparation.

The first permanent Iranian Chief Nurse in the Department of Public Health was appointed in July 1958. Until this time this position had been occupied by various nurses in an acting capacity.

A nurse practice act has been prepared and is now under review. This act is intended to protect the public from unskilled care by licensing graduate nurses from recognized schools. During the life time of this project there have been eight participants sent to the U.S.A. on scholarships. The four who were sent in 1954 were poorly selected because the number of qualified candidates was limited. These participants have been almost a complete loss to the program due principally to marriage. The participants sent in 1955 and 1956 have developed into foremost nursing leaders. One is now the nursing education consultant on a national level, and the other is the Chief Nurse. At present there are two participants in the U.S., one in hospital nursing service who has been extended another year and the other in nursing education who will be returning soon to resume her duties at the Ashraf School of Nursing in Tehran.

Although an Iranian nurse was appointed as hospital nursing service consultant on a national level in September 1955, the program did not really become active until the assignment of an American nurse in January 1957. During 1957 and 1958 accomplishments were limited to assistance in developing plans and specifications for new hospital construction which would provide adequate facilities for nursing service and other hospital activities. In addition to this 72 hospitals were surveyed in regard to setting standards for nursing service and clinical teaching fields for student nurses. Nothing could be accomplished with the reports of these surveys because channels and authority for review and recommendations were not established. Job classifications were also prepared for hospital nursing personnel with the cooperation of personnel from the Prime Minister's office. These classifications were not accepted by the Government. They are presently being studied for a revision to reflect the current nursing situation more adequately and at the same time to help raise standards. Considerable assistance has been given to the Firouzabadi hospital at Rey due to the Minister of Health's request to develop it into a medical teaching center. This included consultation on remodeling, new construction preparing an in-service education program, and improvement in the organization and administration of the hospital. Much of the consultation on new construction has been ignored because the new building was a contribution. In-service education has reached a standstill due to the employment of a nurse matron who wishes to plan her own program, but feel this should add to our experiences.

A medical staff organization has been started but the many chiefs still are operating and find it difficult if not impossible to confine their administration to medical matters. It is felt that a nursing service administrator cannot develop with this age old pattern of each physician assigned a ward being chief even though there are several physicians in any ward and all have full authority for the ward.

STATEMENT OF EVALUATION

Although all of the objectives for the nursing program have not been achieved it is felt that the development of nursing in Iran has been tremendous. It has become a respected and recognized profession for young women whose demands for service are rapidly increasing. The public health nursing program is well established and is rendering a valuable service to large numbers of people. However, the rapid turnover in staff has made it difficult to maintain a qualified stable staff. Until there is a prepared Iranian Chief Nurse in each Ostan to direct the program it seems necessary to continue the services of American nurse advisors. At present there are only 3 Ostans which have an Iranian Chief Nurse prepared in public health nursing. Although scholarships have been given to 14 nurses and midwives in public health at the School of Public Health, American University, Beirut, many of these have either left the profession due to marriage or are working in other agencies.

The educational requirements for schools of nursing have been raised so that better qualified persons will be prepared. This effort has interested more young women in nursing, and as the schools are expanded there will be a larger supply to meet the needs of the country. As yet, it has not been possible to establish a course to prepare faculty members in schools of nursing. At present all of the professional schools of nursing are operated by a foreign faculty. There is a great need to prepare Iranian nurses to assume those positions.

If nursing is to continue to progress, the Government must take cognizance of their employment and salary scale. The ministries are gradually employing more nurses to render care in their hospitals, and at present there is a Government employment law which has been prepared but is still being debated in parliament.

There have been numerous incidents reported from the various health centers on the appreciation shown by mothers for the assistance they have received, especially in relation to having live, well babies. The fact that some of the health centers operate their clinics on an appointment basis and have very few mothers who fail to come is another indication that the service is appreciated.

Nursing service administration is necessarily a long term developmental program which should have objective goals set in terms of 5 to 10 year periods due to:

1. Insufficient nurses to supply even a directional staff; 2. The conditions of existing hospitals. In 10 years, however, there should be enough nurses and sufficient facilities new and remodeled to provide an adequate background for nursing to begin to accomplish effective patient care objectives. At present the short term goal should be standard setting, training existing personnel with tenure and development of positions, organizational and administrative places in the existing framework of the MOH and its hospitals so that nursing can function. The enlargement of the objectives to integrate with those of Hospital and Medical care administration developed in Project 214 should help to accomplish these long term goals.

Appendix VII

EVALUATION OF MALARIA CONTROL AND MALARIA ERADICATION ACTIVITIES CONDUCTED UNDER USO. PROJECT 72. 1953 - 1959

Charles E. Kohler
Malariaologist & Malaria Advisor

I. Historical Perspective.

- A. The Project Completion report for Project 15 signed in March 1959 in effect covers much of the aspects and results of Project 72 since its initiation until essentially the arrival of the present advisor. Hence reference should be made to that document for evaluation of prior years.
- B. That malaria had an adverse effect on the economic and social needs of the country seems to be apparent although efforts made to evaluate the precise nature of this effect cannot be documented statistically but inferences have been made, especially with reference to agricultural production, this inference may be in error for malaria control efforts were carried on side by side with agricultural improvements which makes it impossible to attribute the increase in production to either reduction in malaria morbidity or improved agricultural methods.
- C. The government of Iraq has always shown intense interest in the malaria control effort and was one of the first countries which converted their control efforts to an eradication approach. During the period of active spraying in many areas, when malaria was still a problem the ordinary people of the country looked upon DDT spraying as a godsend as they saw their children enjoying more robust health and fewer deaths occurred from the effects of the disease. But this too fades, since the public often has a short memory, and as malaria disappeared they began to look at the program with some disfavor since its initial dramatic effect on houseflies began to disappear and flies returned in increasing numbers.

II. Specific Activity Objectives.

During the early days of project 72 the specific activity was to control malaria and in the words of Dr. C.A. Alvarado, Director of the Division of Malaria Eradication for WHO: "You must not be proud of the first spectacular results. The splenic indices and the

parasitic indices will drop drastically. This redounds to the credit of DDT, however it is applied - wisely or unwisely". On 9 January 1955 the Government of Iran, WHO, and UNICEF signed a malaria eradication agreement with the following objectives:

"The Government, with the assistance from UNICEF & WHO, has the following objectives in connection with this plan:

1. To achieve complete malaria eradication throughout the country by expanding measures of residual spraying with insecticides until systematic elimination of malaria and prevention of reinfestation have been effectively achieved in the whole country.
2. To establish and develop a "Malaria Eradication Organization (M.E.O.)" as the official executive body for the eradication program. In the framework of this organization, the Division of Medical Services and the Field Operations Division will jointly carry out the program of malaria eradication prepared by the Director of the M.E.O. in collaboration with the Malaria Institute after technical approval by the Scientific Council.
3. To strengthen the Tehran Malaria Institute which is the Scientific Advisory body to the M.E.O. The Institute is responsible for assessment, training, research and collaborates with the Director of the M.E.O. for planning and education of the public".

The USOM objectives with reference to this program date from March 8, 1956 at which time USOM phased out of the malaria program but in early 1957 the Iranian Government made a request for another malaria advisor who, according to the project agreement was to:

- (1) Analyse 1957 operations, (2) observe and evaluate 1958 operations, and (3) evaluate year-to-year progress toward objectives of eradicating malaria from Iran by 1961.

III. Economic, Social, and Geographical Factors Leading to Selection of Activity Sites.

During the days of malaria control prior to 1956 sites selected for carrying on malaria operations were confined largely to the more important economically productive areas of the country, where considerable population resided. As is true with most such operations anywhere in the world highly malarious areas were notorious, and thus little need existed to prove how extensive was the disease.

Unchallenged, malaria of even slight endemicity, can sometimes be overwhelming.

With the adoption of the concept of eradication all areas of the country became important, and because of the large size of the country it became highly important to define and delineate malarious areas, otherwise considerable effort could be dissipated over wide expanses of territory. Thus the whole of Iran must be taken into account when planning and carrying out eradication, no matter how difficult of access, or seemingly unimportant from the viewpoint of the country as a whole. To be successful such a program must bring evaluation techniques of the highest order into these remote areas, and if operations are necessary these must be carried out with highest operational efficiency.

IV. Chronological Description of Activity Implementation.

- A. Work accomplished and how accomplished. (N.B. The termination report of Dr. McLowell summarizes accomplishments through March 8, 1956. Little USOM activity took place between that time and my arrival in late September 1957, hence the following pertains particularly to events subsequent to that date.)
 1. Operational. Since the present advisor is assigned for advisory duties only, his efforts will largely be considered under that heading, even though much of what he advised affected the operational program.
 2. Advisory. (These will be briefly mentioned under specific headings in outline form.)
 - a. Analysis 1957 operations.
 1. Plan. Organization did not finance Malaria Activities in 1957 until after March 21st with the result that spraying in many areas started late and complete insecticidal coverage was not achieved until, in some cases, long after the transmission season started.

2. During the year A. stephensi became resistant to DDT in the South, this combined with late floods provided unusually favorable conditions for this particular vector. Increasing vector populations were noted but action was deferred until an explosive epidemic broke out from widely scattered foci in the south.

b. 1958 operations.

1. As a result of this outbreak dieldrin was substituted for DDT, normal dosages were used but due to WHO insistence a second spraying was carried out resulting in a total application of 90 milligrams per square foot.
2. The present advisor felt that 50 milligrams was ample. The decision was made to respray based on bio-assay tests carried out by a WHO team, but in this recommendation no cognizance was taken either of the quality of the field spraying or the total over-all killing power of the entire structure.
3. It was expected that as a result of the 1957 epidemic quite a few residual cases would appear in 1958, at least in the early part of the year. This, in fact, occurred as an analysis of surveillance records shows. But infant cases dropped off sharply after the first of July, so the results of the 1958 operations may be much more successful than the Malaria Organization feels they were. This pessimism is already leading to the feeling that 100 milligrams per square foot will be applied in 1959.
4. In some areas of the south nomadic tribes and more restricted movement of static populations dwelling in erratically erected summer butts complicate the malaria picture in that area. The Institute of Malariology has been studying these nomadic movements since 1953, and they

have consistently recommended the spraying of these structures. These structures were relatively untouched in 1957, in 1958 an effort was made to include them. The key to malaria eradication in the south lies in their complete coverage by constantly circulating teams, drug distribution advocated by some would founder on the inability to get enough trained personnel into the field to cover at least 95% of this population at regular intervals.

5. Recommendations made on surveillance:

- a. Considerable improvement has been made in the surveillance organization in 1958 and 1959
- b. Continuing recommendations have been made to improve the quality of staining since Giemsa is being used in most centers without distilled water or buffers. It has been contended, without foundation, that under Iranian conditions the present technique is suitable.

6. Recommendations on organization.

- a. Continuing recommendations have been made to influence decentralization in the country. The present Shahrestan (country level) still includes such a large area that even if population is small it is scattered over wide stretches of territory. Every effort is being made to bring about greater decentralization on the recommendation of present advisor, it was felt that such decentralization would remove a great deal of the present difficulty.
5. b. considerable activity in the health field adequate maps of the country still do not exist. Maps are now being used regularly, but these do not include all of the inhabited areas, and no accurate record of existing

villages exists. Information collected during 1959 operations will provide information for the correction of this deficiency.

- c. Dr. McDowell mentions in his report that by March 8, 1956 only one employee with a tape adding machine constituted the entire statistical component. This situation has improved considerably but the voluminous forms used and the need for making frequent copies has hindered immeasurably adequate analysis of collected data. Recommendations in this direction have been made and after 1959 operations realistic figures should reflect more accurately operations.

3. Training.

- a. This is still carried on by the Institute and the course of study has been made more realistic in line with project needs.

4. Construction. Not applicable to this project.

V. Statement of Evaluation.

A. Accomplished in relation to specific objectives.

It is felt that the present USOM advisory assistance to this project has been successful in that, while considerable guidance has been needed to correct and reorient the malaria eradication effort to a better realization of its objectives, this guidance has been accepted at all levels and that gradually, over a period of time, a more effective program will emerge which will travel with assurance towards its stated objective the eradication of malaria.

There seems to have been a tendency among some advisory service to catalog the defects of the organization but giving no remedial suggestions which can help them to overcome their problems. The present advisor has been aware of the defects, but has analyzed them one at a time, and persevered until some solution was found.

- B. Accomplished in relation to long range or broad objective.
1. There is no doubt that the impact of control considerably improved health conditions in many rural areas. The implication here is that in the long run there will be a healthier labor force, followed by a rise in the standard of living providing economic development parallels improvement of the health situation.
 2. The success of the former control program left as a residuum a deep sense of public appreciation. Even today one runs into references to the success of the Point IV DDT program. In other terms it is called a successful American program. This statement fails to give due credit in the many devoted and able workers who have stayed with the program and whose continued enthusiasm, if given adequate support and encouragement, will bring the program to a successful conclusion.
 3. The personnel engaged in malaria eradication, unfortunately face an uncertain future. Many of them, even physicians, are daily paid personnel and as the program develops they will find themselves without employment. It is unrealistic to talk about absorption into other expanding programs in the health department, since few responsible positions would be open to them. With the limited economic opportunities a ceiling on what the country can afford to spend for health will soon be reached. It would seem that present efforts should be devoted to two phases: (1) place increasing emphasis on malaria eradication, and (2) develop adequate water supplies. A program in environmental sanitation would be more successful after ample supplies of water are developed upon which to base improvement in sanitation, and, additionally, a cadre of trained personnel would be available who, as a result of their service with the malaria program, would know the country and its problems.

CEK

June 4, 1959

May 28, 1959

EVALUATION OF
SANITARY ENGINEERING AND ENVIRONMENTAL SANITATION
ACTIVITIES CONDUCTED UNDER USOM PROJECT 72

by

A. Dale Swisher, P.E.
Chief Sanitary Engineer, USOM/I

I. Historical Perspective.

A. Project 72, entitled "Project Agreement for Training and Demonstration of Rural Public Health", was an umbrella-project gathering together in one project all public health activities which had been therefore conducted under Project 50, 52, 53 and 60 and by five UOI agencies, i.e., the Ministry of Health, the Ministry of Agriculture, Irrigation and Animal Husbandry, the National Institute of Health, and the National Institute of Hygiene. Signatures of the representatives of the five agencies and the Director of USOM/I were affixed on March 4, 1953. No member of the present Public Health Division staff was in Iran at that time. The situation prior to that date can be postulated therefore only through reference to an unsigned file document dated July 29, 1953, and entitled "Review of 1953 Sanitation Program and Continuing 1954 Activities".

This document states "the objective of the sanitation program has.. been to establish.. the concept of preventive medical practices by improvement of basic sanitation defects found in the environment... To conduct a program of training and demonstration.. exemplified by improvement of water supplies and excreta disposal, food sanitation and control of insect vectors of disease. As previous attempts to improve the environment of the country have all stemmed from a centralized program and met with indifferent success or total failure, a real attempt has been made to stimulate and utilize local participation in all our projects".

The document continues, "The measure of success in such a program is difficult when described in reference to specific physical accomplishments against the overwhelming needs of Iran. However, in measurement against another standard, the progress toward establishment of a sanitation program has met considerable success as evidenced by the presence of the

Sanitary Engineering Services Division in the Public Health Cooperative Organization. We have moved half way towards our objectives with full hopes that the future will permit full accomplishment".

It is known that three ostan Sanitary Engineering offices (Tehran, Isfahan and Shiraz) had been established in the fourth quarter of 1951 and two additional (Tabriz and Caspian) in January, 1952. It is impossible to state what these five offices had accomplished in eighteen months. However, considering the virtually unlimited funds made available to the PHCO and the direct, operating status of the American Personnel to the PHCO it is reasonable to assume that a water supply and, perhaps, an excreta disposal program was flourishing in the five cities mentioned. It is doubtful that there was much activity outside the limits of those ostan centers.

It is extremely interesting to note that the document lists four (4) specific difficulties encountered: 1. Procurement ("Our first experience in obtaining supplies from the U.S. was very disheartening and some supplies ordered in 1951 still remain undelivered"). 2. Transportation ("Transportation has and remains one of the most critical of all problems facing the program. At no time have sufficient vehicles been available for a fullscale field program. Vehicles are an absolute essential for operation and without them there is no possibility of an adequate program"). 3. Shortage of Technicians ("A shortage of American technicians has at all times hindered the expansion of our field program. Far too much time has been required of the technician in non-technical matters"). 4. Inadequate cooperation ("In certain areas lack of response by the communities concerned has been the reason for a slowness of field program. Assistance from the HOH has until very recently been non-existent").

Considering that the first activity in public health or preventive medicine had been initiated only two years prior to the signing of Project 72, that the initial path of the PHCO was beset with difficulties and that progress was disappointing, it seems safe to say that the 1952 program was embarking upon virtually unexplored, uncharted territory and that whatever progress has been made to date can be said to be almost entirely the results of Project 72 activity.

3. So far as I know there are no figures which can relate this project to Iran's economic needs. There is little doubt, but no statistics to prove, that environmental diseases,

Particularly the gastro-intestinal group, rank first or second as the most devastating and common public health problem of the country. The debilitation and lassitude connected with diarrhea, malaria, etc., has, without question, a serious impact upon the financial economy of Iran. Likewise, the reduction in infant mortality, the prologation of the average life-span, increased vigor during a man's productive years, all directly associated with and resulting from improved environmental sanitation have a substantial impact upon the social life of the country. The sanitary engineering and environmental sanitation legs of the over-all project were essential if the total was to move forward with any degree of success.

3. The interest of the Government of Iran prior to the initiation of this project has already been expressed. (I A above) With the single exception of the venture to provide a public water supply for the city of Shiraz there is no known case of any private citizen undertaking an engineering or environmental sanitation project for the benefit of the public. In general, the low literacy level, the lack of hygiene or sanitation instruction in the few existent schools, an inadequate program of preventive medicine in the medical schools and a public health education program combined to prevent the attainment of most public health objectives.

II. Activity Specific Objectives.

Project 72 provided for the following specific objectives:

A. Establishment of Division of Sanitary Engineering within the Ministry of Health to:

1. Initiate suitable project (in sanitation)
2. Prepare designs (for those projects)
3. Review and approve designs prepared by others
4. Conduct field program of specific sanitation activities on a decentralized operating level
5. Prepare and enforce standards
6. Devise means of adequate financial support to a sanitation program

7. Establish sufficient influence and statutes that the field of sanitary engineering will receive enlightened and continuing support.

B. Deep Well Distribution Systems

1. Assist local communities in developing safe potable water supplies
2. To construct 75 water distribution systems throughout the country
3. Offer training in drawing up contracts and in construction and installation of water distribution systems.

In addition, the project specifically merged Project 52 which provided for the following:

- A. The drilling of fifty-one (51) deep wells
- B. Establishment of fifty (50) distribution systems
- C. Continuation of a diesel engine and deep well maintenance training program initiated under Project 27.

Thus the only quantitative figures set forth in this portion of the total project are the drilling of fifty-one (51) deep wells and the construction of one hundred twenty five (125) distribution systems around those wells. The apparent discrepancy is partially explained by the fact that Project 27 provided for U.S. dollars to drill thirty four (34) wells. It can only be assumed that the remaining forty distribution systems were to be constructed about wells already in existence.

III. To delineate at this late date the economic and social factors which led to the 1953 selection of activity sites is pure conjecture. Certainly four of the five initial activity sites were among the largest cities in the country. Meshed was added shortly thereafter. It can be assumed that the planners thought the largest, most populous centers would contain persons most favorably disposed to the activities planned and would be most able to contribute financially to the implementation of those activities. Also, since a nationwide but decentralized program was desired, the selection of the chief cities in these states was a logical method of obtaining the geographical dispersion desired.

The diffusion of activities outside the limits of the ostan capitals is, today, difficult to understand. There are indications that work was performed in numerous villages chosen as a result of political influence on the part of high government officials, wealthy landlords, etc. This statement is not intended as criticism. So long as the program demanded some degree of local financial participation it was necessary to seek out those with the requisite financial resources. This frequently proved to be the government leaders. In addition, it is natural to hope that the embracement of the program by prominent, well known personalities might induce other individuals or towns to follow suit. Suffice it to say that Iran's needs for a basic environmental sanitation program were as acute in one geographical area as another; support was most probable in the ostan capital areas and this one factor was adequate justification for the initial selections made.

IV. It is today impossible to give specific description, either chronologically or quantitatively, of the work accomplished. A major portion of the records are not available. The decentralized nature of the program meant that each ostan office was responsible for its own record maintenance and the sketchy, vague, undated, unsigned memos available to day reveal that the "let's-get-something-done" attitude of those days gave little consideration to records. Following solution of the PHCO and the integration of activities within the Ministry of Health record keeping was not assigned a position of great importance. During the life time of project 72 each ostan was expected to submit a monthly report of sanitation activities. However, there was no written requirement to that effect, reports, if submitted, were normally two to five months late and no action was taken against defaulters. Under these circumstances the following paragraphs represent the facts available supplemented by the impressions and beliefs of the writer. It must also be remembered that the form of organization was drastically altered during the tenure of Project 72. Activities during the first portion, or Phase I, were conducted under the PHCO organization and there is reason to believe that the aspects of drive, determination, purpose, methods and achievements were much more pronounced than during the second portion (Phase II) when the Ministry of Health was solely responsible for progress.

A. Operationally each office established was provided with one or more Iranian engineers, usually with no public health

PROJECT PROPOSAL & APPROVAL

Continuation Sheet

FOREIGN OPERATIONS ADMINISTRATION
UNITED STATES OF AMERICA

A. COOPERATING COUNTRY

D. PROJECT NUMBER

C. SCHEDULE

D. SHEET OF SHEETS

OF

If there is insufficient space to give adequate information on any PPA Schedule, use this sheet to complete the information, indicating above in Block C the applicable Schedule and indicating below the applicable block number, thus: "Block — Continued."

- 6 -

or sanitary engineering training, with four to thirty sanitarian-aides, with necessary vehicle drivers, draftsmen, etc., and with one American advisor, a sanitary engineer or a sanitarian. Offices of this type were established, at one time or another, in seven ostan under the PHCO phase. Since "Integration" staffs have been established, in the other three ostan. Each office was expected to participate in all the activity fields enumerated under Par. II above. In actuality the majority of ostan offices confined themselves to Items II A (1), (2), (4) and B (2). Under I, with Americans acting as Co-Directors, a substantial degree of success was achieved under Item A (4), (specific sanitation activities), and some ostan had good results with Item A (2), (preparation of designs). Under Phase II, Americans as advisors only, all activities began to fall apart and the majority of ostan offices now normally attempt only routine continuation of sanitation activities begun under balmier days. As a whole the ostan offices are so reduced in both quality and quantity that it is questionable if new undertakings as to concept, design and operation would meet with success without considerable outside help.

The scope and degree of activity attempted is revealed by the following figures submitted by nine of the ten ostan offices for the period March 21, 1957 to February 20, 1958. It is possible that the figures are neither accurate nor complete.

BEST AVAILABLE DOCUMENT

SANITATION ACTIVITIES - 1336 (partial)

| Ostan | Shallow Wells Completed | Latrine Slabs Installed | No. of People in class | No. of Food Inspect. | No. of Bathhouse Inspect. | No. of Barber Inspect. | No. of Hotel Inspect. |
|--------|-------------------------|-------------------------|------------------------|----------------------|---------------------------|------------------------|-----------------------|
| Tehran | 49 | 360 | 14,507 | | | | |
| 1 | 102 | 1,745 | 28,200 | | | | |
| 2 | 36 | 504 | 1,072 | 1,536 | 43 | 81 | 5 |
| 3-4 | 48 | 381 | 10,755 | 14,785 | 368 | 1,313 | 529 |
| 5 | 52 | 329 | 16,520 | 14,033 | 540 | 1,019 | 434 |
| 6 | 16 | 405 | 1,448 | 1,384 | 178 | 107 | 1 |
| 7 | 32 | 496 | | | | | |
| 8 | 5 | 795 | 907 | | | | |
| 9 | | | | | | | |
| 10 | 14 | 728 | 69,233 | | 60 | | 12 |
| TOTAL | 354 | 5,640 | 128,642 | 21,738 | 1,189 | 2,520 | 981 |

The deep well and distribution system program was, as stated before, an activity pursued under at least three projects, namely 27, 52 and 72. There is evidence to believe that, in the beginning, this was a popular program. The USOM provided funds and equipment necessary to drill a well and completely equip it with pumps, diesel engine drive, pump house and electrical connections. This complete, ready to operate, unit was presented without cost to the local community with the understanding that the community would pay all, or a portion, of the costs of constructing water storage (reservoir) and distribution facilities. In fulfillment of its obligations the USOM contracted with a Mr. H. Richards to drill thirty four (34) wells and authorized the expenditure of U.S. \$350,000 for this purpose. All wells were drilled but one struck salt water and one no water at all.

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- 8 -

In addition to these 34 wells, Project 52 authorized U.S. \$ 712,500 (plus 14, 149,906 Rials) for the drilling of fifty-one (51) additional wells. Of these 47 are complete, two partly complete and two were dry holes. Thus of eighty-five (85) wells contracted for seventy-nine (79) are ready to produce water. An exceptionally good record.

The other half of the problem is not as favorable. Project 27 authorized an unspecified number of distribution systems to be "installed where needed" for the sum of only U.S. \$ 15,000 (plus Rls. 153,400). The small sum would indicate that not more than two systems could have been constructed. Even this is so indefinite that the writer prefers to ignore this portion of the record.

The next authorization is in Project 52 and reads "installatic of distribution systems for 50 wells, 26 of which were drilled last year". The records indicate that the PHCO constructed distribution systems around ten (10) of the 34 wells drilled under Project 27. To date twenty-eight (28) additional distribution systems have been completed about the other 45 producing wells. Total completion to date - 38, or 48% of the producing wells and 30% of work authorized.

In spite of this unfavorable showing there is very little activity directed to fulfilling outstanding obligations. Only four systems have been completed and turned over to the local authorities during the past twelve months. A drilling rig has sat idle for more than four months while crew and engineers work on projects of higher priority. No prediction can be made when the projects will be completed.

P. Advisory. It is believed that 22 Americans have worked with the sanitation phase of Project 72. The maximum number present at one time was shortly after the inauguration of the project and appears to have been twelve (12) men. The minimum number was in the summer of 1957 - only three. For various reasons, including decreasing interest in the program on the part of the Iranian but principally because of the inability of JCA to recruit experienced, qualified personnel, no ostan office has continuously had a resident sanitation and/or engineering advisor. The Shiraz area comes closest to this goal having had a man present continuously from 1951 to November 1958. The post has been vacant since that date.

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|------------------------------------|---|------------------------|-------------------|-----------|
| FOA-10-1HX (13-84) PPA/Cont. | PROJECT PROPOSAL & APPROVAL Continuation Sheet | A. COOPERATING COUNTRY | B. PROJECT NUMBER | |
| | FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | C. SCHEDULE | D. SHEET | E. SHEETS |

If there is insufficient space to give adequate information on any PPA Schedule, use this sheet to complete the information, indicating above in Block C the applicable Schedule and indicating below the applicable block number, thus: "Block — Continued."

- 9 -

As in every program some advisors have done excellent work. Others were unable to make a complete adjustment to the demands of Iran, the customs and practices of her people, or they were not sufficiently mature or experienced to perform in an outstanding manner. Even among Iranians no ostan has had the same chief engineer throughout the duration of Project 72; every man on the headquarters staff is new to his job during the same period.

Poor salaries and rapid turnover contribute to difficulties in developing the sanitation program. There is a further desire to concentrate on construction activities.

C. Training. The training accomplished has been indirectly touched upon. The brand-new program began in 1953 with untrained men and, in 1959, the staff is still largely untrained because of the far too rapid personnel turn over. Training activities may be divided into four (4) categories:

1. Engineering training in the United States
2. Engineering and sanitation training at the American University of Beirut (AUB).
3. Sanitation training at the Palasht Sanitation Training School, Iran
4. Other sub-professional training

One year training courses in sanitary engineering and or public health have been provided by USOM/Iran to twelve (12) Iranians to date. Two of these men are WHO staff consultants advising in other countries today; two are employed by the GOI in other fields; two more have refused to return to Iran to give of their services; and the remaining five (42%) are available to the sanitation program. All twelve men were chosen under Phase I of Project 72. No engineers have been sent to the United States for training since the MOH assumed responsibility for the program.

Training at AUB has been provided for both engineers and sanitarians. The School of Public Health, AUB, since 1953 has extended matriculation to seven engineers and to 17 sanitation students (including five from the National Iranian Oil Company). Of those trained for the Iran-U.S. program only three engineers (43) and four sanitarians (25%) are available today.

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| PROJECT PROPOSAL & APPROVAL Continuation Sheet | A. COOPERATING COUNTRY | B. PROJECT NUMBER | |
| | C. SCHEDULE | D. SHEET | SHEETS |
| PPA/Cont. FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | | | OF |

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- 10 -

Sanitation training at the Falasht school presents a better picture. Eight classes, a total of 376 men, including 16 men from Afghanistan, have been graduated. The school was established by the Near East Foundation in 1952. In the early years considerable emphasis was placed upon practical work. The classroom activities were slanted in that direction and three months were set aside for supervised field experience in the villages. Of late the theoretical work has been increased from three months to seven while the practical experience has been decreased from three months to two. The results are yet to be felt.

It is not known how many of the 360 Iranians trained are making use of their education. The budgets of the ostan sanitary engineering sections allow the hiring of 100 sanitarian-aid supervisors. It is estimated that the various cities and villages throughout Iran have employed another 100 graduates. If so, 56% of the graduates are producing better health for Iran -- a satisfactory figure for Iranian conditions.

Sub-professional training has been conducted in at least two ways. The PHCO conducted 1-2 month courses, an in-service type training, in each ostan. The number of men trained is unknown. Also, Project 52 provided funds to train personnel "in the operation and maintenance of deep water wells and equipment". This training was begun at Karaj College. Later the task was assumed by the Near East Foundation at the Kamazan school. The course stressed basic sanitation as well as being thoroughly practical regarding pumps and diesel engines. Generally known as the Pump Master's course it served a definite need. Although the need still exists the training is no longer given, either by the Near East Foundation or by the Ministry.

B. Funds. The amount of money actually collected and spent is not known to the writer. The following table shows the amounts authorized by the USOM, by the Iran-American Joint Fund for Public Health, and the stated contributions of the GOI. Figures include all known amendments to the listed projects. It must be noted that contributions to Project 72 were to the entire project - not restricted to sanitation or engineering activities. Where known that portion earmarked for sanitation has been noted.

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| FOA-10-117X • (8-84) PPA/Cont. | PROJECT PROPOSAL & APPROVAL Continuation Sheet | A. COOPERATING COUNTRY | B. PROJECT NUMBER |
| | FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | C. SCHEDULE | D. SHEET OF SHEETS |

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- 11 -

FUNDS FOR SANITATION ACTIVITIES

| Pro- ject | USOM Authorization Dollars | Authorization Rials | Joint Funds (Rials) | GOI In-kind Cent. (Rials) | Notes |
|---------------|-------------------------------|------------------------|------------------------|------------------------------|-------|
| 23 | 196,000 | 2,970,000 | | 6,000,000 | 1 |
| 27 | 365,000 | 753,400 | | | |
| 52 | 712,500 | | 18,339,906 | 15,000,000 | |
| 72 (FY 54) | - | | 70,649,774 | 15,000,000 | 2 |
| (FY 55) | 425,000 | | 89,252,000 | | 3 |
| (FY 56) | 1,165 | | 53,000,000 | | 4 |
| (FY 57) | 108,000 | | 119,340,000 | | 5 |
| (FY 58) | 41,384 | | 109,500,000 | 5,168,000 | 6 |

Notes:

1. All funds, except 330,000 Rials, paid to Karaj College, were transferred to Project 27.
2. Rls. 5,000,000 of GOI in-kind contribution earmarked for Environmental Sanitation.
3. Environmental Sanitation portion unknown.
4. Rls. 22,000,000 of Jt. Funds earmarked for Env. Sanitation.
5. Rls. 26,340,200 " " " " San. Engineering
6. Rls. 20,600,000 " " " " " "

V. Statement of evaluation.

A. Specific objectives. Considering the thirteen objectives set forth in Par. II above, it is the writer's opinion that only one (the drilling of 51 deep wells) can be considered as successfully completed. One item (decentralized field program

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| FOA-10-18X 45-54 PPA/Cont. | PROJECT PROPOSAL & APPROVAL Continuation Sheet FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | A. COOPERATING COUNTRY | B. PROJECT NUMBER |
| | | C. SCHEDULE | D. SHEET OF SHEETS |

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did achieve some success but is now unsatisfactory. Progress on the remaining eleven objectives has been so meager that the only evaluation possible is unsatisfactory. To document this rather startling conclusion requires a full audit and lengthy investigations conducted in two languages. Facilities for translation, typing, etc. are not available to the writer - the task should be done by the USOM Controller's office.

However, from the data available and intelligible to me and based upon eighteen months acquaintainship with the problem the writer summarized the individual achievements as follows:

1. Initiate suitable projects. The headquarters staff has virtually no contact with field personnel or operations and is, therefore, normally unable to initiate desirable projects. In the absence of guidance from headquarters the ostan offices, depending upon the energy, training and strength of the ostan sanitary engineer, initiate projects on a haphazard, uncoordinated, piece-meal basis.

2. Prepare designs. Some standard designs were half completed in earlier days. An effort by the writer to have them completed resulted in failure. The deterioration of ostan staffs has created a situation where, with one exception, those staffs are not able to do design work. The headquarters staff is capable of preparing sanitation designs but it is engrossed in non-sanitation activities and does not, normally assume this obligation.

3. Review and approve designs. All ostan offices have been directed to forward all plans affecting any aspect of health (hospitals, water, sewerage, clinics, bathhouses, etc.) for headquarters approval. The ostan officer state that approval is not forthcoming for two to six months.

4. Conduct field programs on a decentralized level. Headquarters has not published any guide lines for a national sanitation program. Consequently, each ostan proceeds on its own, controlled only by the maximum budgetary figure set by headquarters on the basis of last year's expenditures. In the field, engineering sections (part of Pehdari) have little control of funds allotted to them as all budgeting and accounting is under the control of the Pehdash chief. Under this administrative chaos the engineering section is impotent and ineffective.

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| FOA-10-111 1-581 PPA/Cont. | PROJECT PROPOSAL & APPROVAL Continuation Sheet FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | A. COOPERATIVE COUNTRY | B. PROJECT NUMBER |
| | | C. SCHEDULE | D. SHEET OF SHEETS |

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- 15 -

5. Prepare and enforce standards. Not until October 25, 1958, did the Environmental Sanitation Division establish a Codes and Regulations Section.

6. Devise means for financial support. All funds allotted to sanitary engineering and or sanitation come from the Iran-United States Joint Fund plus local contributions. The same procedure prevailed in 1953. Thus, in the six years of the project, stable, has not been established.

7. Establish influence of sanitary engineering. Some influence has admittedly been established. The degree is controversial.

8. Assist local communities in developing potable water supplies. Considerable assistance has been given in developing shallow well water supplies. Due to incomplete construction, to lack of knowledge or financial difficulties these are frequently not potable and remain health hazards.

9. Construct 75 water distribution systems. As stated in Par. IV A, only 33 systems, or 30% of the work authorized, have been completed. Progress on the remaining 70% is in intermittent and uncoordinated.

10. Training in construction of water systems. Since no systems are being constructed no training is being done. Majority of men trained previously are no longer available.

11. Drilling of 51 deep wells. This activity was fully and completely accomplished.

12. Establishment of 50 (additional) distribution systems. See No. 9 above.

13. Continuation of diesel engine and well maintenance training. Training course dropped.

B. Accomplishments in relation to long-range objectives. In spite of the fact that the program has signally failed to accomplish the objectives set forth for it, no one will deny that the program has improved conditions in many cities and in some villages in Iran. Reliable statistics to indicate reduction in morbidity rates are not available, if they were, could one say the reduction was attributable only to sanitation

64

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| FORM 10-70-1 • (3-64) PPA/Cont. | PROJECT PROPOSAL & APPROVAL Continuation Sheet | A. COOPERATING COUNTRY | B. PROJECT NUMBER |
| | FOREIGN OPERATIONS ADMINISTRATION UNITED STATES OF AMERICA | C. SCHEDULE | D. SHEET OF SHEETS |

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- 14 -

activities. Increasing education, ease in spread of information, better transportation, better financial status have all played their part.

In general, the Iranian public is eager to acquire a better standard of living and, once it understands the relationship between sanitation and health, it desires and appreciates improvements. Possibly the most outstanding example of this concerns the deficient water distribution system program. The institution of that program as a USOM activity resulted in an extremely effective demonstration. Failing by far to meet its quantitative objectives it still demonstrated the value and desirability of clean, relatively accessible water. The demand which arose throughout Iran has resulted in the Seven-Year Plan Organization undertaking the construction of, or improvements to, approximately 150 water systems. More than 100 additional plans or surveys have been made. The number is limited only by the funds available. A real need of the people has been identified, they have become articulate and they will, in time, build solidly upon this one facet of the Project 72 program. It is hoped that, in time, they will also come to demand the other sanitation benefits which the project attempted to introduce.

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