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FROM - SEOUL

SUBJECT - End-of-Tour Report - Niels C. Beck

REFERENCE -

Forwarded herewith is the End of Tour Report of Niels C. Beck, Industry Branch, IED Division.

Mr. Beck's report is essentially accurate, and his analysis of progress made is wholly objective. Mr. Beck's extensive experience with NIRM quite adequately supports his recommendations for the consolidation of services and improvement of the inspection and testing program. Aside from the potential benefits from a future consolidation, the most promising prospects for NIRM's effectiveness lie in the extent to which it participates in the export inspection and testing program. Mr. Beck's understanding of the more practical aspects of this phase points up the probability of substantial progress in implementing this operation which is so essential in the export drive.

In regard to Part II - Korea Institute of Science and Technology, it should be noted that the unavoidable splitting of responsibility within the USOM for the many details connected with this project has somewhat reduced Mr. Beck's participation. Nonetheless, his presentation adequately reflects the scope of his role, identifies basic problems and generally positions the project in an appropriate perspective.

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End-of Tour Report (Control No. U-513)

Name Niall C. Beck Job Title Industrial Advisor
 Country of Assignment Korea Contract Employer (if applicable) _____
 Tour of Duty Began 1 November 1964
 Tour of Duty Ended 1 Dec. 1966 Prior Country Assignment & Years _____
 Project Activity, if any, on 1) Industrial Standards and Speci-
 which engaged (Name & No.) fications. 2) Korea Institute
of Science and Technology.

Contents

This report covers two discrete projects and their related objectives:

I. Industrial Testing and Standards

- Consolidation of Services
- Industry Area Program
- The Export Product Promotion Program
- The Inspection and Testing Program
- Joint EPB/USOM Research Committee
- Participant Training

* Appendices (3)

II. Korea Institute of Science and Technology

- Development of Technical Areas for Engineering and Research
- Joint Economic Planning Board/USOM Research Committee

* Appendices (3)

* All appendices are available only at USOM/K-IED/I.

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I. INDUSTRIAL TRAINING AND STANDARDS

A. GENERAL OBJECTIVES

History

The National Industrial Research Institute (NIRI)

It was not until after the United States Operations Mission (USOM) entered the picture as the U.S. Office of Economic Cooperation in 1958 that the Institute's present emphasis on industrial quality control began to crystallize. In Korea, many manufacturing plants have yet to achieve what might be called an acceptable local standard of quality. Few have reached acceptable standards in the world market. In view of this great need, since 1958, USOM/Korea has provided U.S. resident technical consultants, equipment, technical literature, NIRI staff training in the U.S., buildings and supporting facilities at NIRI.

With the Korean Bureau of Standards (KBS) and the Korean Standards Association (KSA) which together prepare, modify, adopt and translate foreign standards, NIRI provides a physical testing facility to promote and measure the industrial effort to make better products through quality control.

B. SPECIFIC OBJECTIVES

1. Consolidation of Services

In March 1966 the Minister of Commerce and Industry (MCI) asked USOM to prepare a report on the Institute's position in the solution of industrial problems in Korea.

This report (Appendix A) recommends a consolidation of NIRI, the

Korean National Bureau of Standards (KNBS) and the Korean National Bureau of Weights and Measures. The following were subsequent developments:

- a. A recommendation was made by the Quality Improvement and Technical Assistance Working Group (QITA) to the Export Promotion Subcommittee (EPSC) in June 1966 for USOM/K to explore the possibility of a sister relationship between NIRA and the U.S. National Bureau of Standards (NBS). A first step toward this objective was suggested in the form of a survey by NBS of the situation in Korea regarding inspection, testing, standards and specifications.
- b. As early as 1961, assistance from the U.S. Bureau had been planned, but not implemented. Now the extremely broad problems of export testing and inspection, multiplying out of the ROKG Export Promotion Program obviously require more expert advice than has previously been available.

2. Industry Area Program

In May 1965, a USOM/K effort to approach export industry problems on a regional basis took off with the designation of the Taegu Industrial Area as the point of departure. Agreement on objectives was reached after several months of almost continuous meetings, surveys and other visitations with the Taegu Industrial Association (private industry), the Provincial Governor, the Mayor and the Taegu Chamber of Commerce.

Experts in the technologies involved in the industrial area, e.g. quality control, iron foundries, machined metal products, plant layout, etc., have been recruited and are on the job.

NIRA is helping to equip (with USOM funds) the local provincial

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laboratory and train the staff. NIRI will also provide back up testing for the experts until the local laboratory and plants are able to take over.

While this plan was moving forward, the Pusan area^a was surveyed for a similar program. The results of this survey are set out in Appendix B.* One expert is currently in residence at Pusan and another will soon join him.

3. The Export Product Promotion Program

The Co-ops

Previous to 1964, most private industrial cooperatives in Korea were essentially political and/or agents for procuring commodities under the USOM Supporting Assistance program. With the help of NIRI, MCI and other ministries, many of these co-ops are reorganizing to provide inspection and testing services for their members. The objective is the foundation for a largely self-sustaining, privately operated, in-plant and private co-op system for quality control, inspection and testing.

4. The Inspection and Testing Program

a. Background

The Export Product Inspection Division at NIRI has the following responsibilities:

- 1) Acts as the referee in product inspection disputes referred to NIRI by the Export Inspection Section of MCI, e.g. between plant and buyer, manufacturer's association and foreign traders, in interassociation disputes, changes in specifications, etc.

* See (sub.) Appendices IV and VIII of Appendix B.

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2) At MEI's bidding or at industrial plants' requests, investigates causes of inspection failures and provides testing and some engineering services to eliminate causes. Currently, thirty-two plants are receiving these services.

3) Is solely responsible for the export inspection of eleven items for which no other inspection and testing facilities are available, e.g. pencils.

4) Trains inspectors for the private inspection agencies officially certified for export inspection by ROEG. Seventy-five inspectors were trained through August 1966.

C. ACTIVITIES FAVORABLE AND UNFAVORABLE FACTORS

1. The Inspection and Testing Program

The objectives outlined in (4) pp. 5-6 of the foregoing must now be scrutinized in the light of remaining developments and problems:

a. The program continues to leave wide product areas mostly unattended, e.g. machinery products.

b. Most private co-ops officially designated by ROEG as inspection agencies are strongly influenced by individual members (mfg. plant owners) in the association to which they owe their existence. For other, but equally unfortunate reasons, some of the most important ROEG inspection agencies (vs. ~~private~~ co-ops), e.g. the Agricultural Products Inspection and Fisheries Products Inspection Institutes, lack both adequate staff and proper equipment for the great national responsibility they are assigned.

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c. Finally, and of most immediate importance, major improvements must be made in the communications among the various organizations in Korea, government, military and private, which are concerned with the broad problems of product standards and specifications. Essentially there are seven different organizations involved, e.g. NRI, Korean Bureau of Standards, Korean Standards Association, etc.

Appendix C describes Korea's existing inspection and testing system.

2. The Joint Economic Planning Board/USOM Research Committee

Since the last End of Tour report (1964, Appendix A) this committee has sponsored or continues to sponsor eight projects in the field of the physical sciences.

Overall, it is agreed that the studies have attained anticipated targets, viz. the identification of competent staff and facilities (or the opposite) in Korea for pursuing; surveys, engineering problems and/or the attainment of industrially useful information and, far less frequently, research projects. All these projects continue to be "farmed out" to local schools and laboratories, but nevertheless, this activity has stretched the ability of USOM/IED staff to screen, implement and monitor it and two projects have recently been shifted to the Korea Institute of Science and Technology (KIST).

3. Participant Training

NRI continued to send participants to the U.S. on a five year schedule laid out in 1964 to meet industrial testing needs on a realistic priority basis.

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Also, with the aid of USOM, MCI has reached an agreement with the Council for International Economic Cooperation and Development in the Republic of China (CIECD) to train both inspection system administrators and inspectors in Taiwan. CIECD has also agreed to send several of their own experts to Korea for short terms for "multiplier" activities (meetings, seminars, etc.) among both EOEC and private inspection and testing agencies.

D. EVALUATION OF RESULTS AND PROGRESS TO DATE

1. The Industry Area Program

The Taegu Industry Area Program has received widespread attention for results already achieved as witnessed by the urgent request already being implemented, for the same kind of help from Pusan City and the Kyongnam Provincial Government. Still more recently requests have been received from Kwangju, Chuncheon and Chonju and the Yongdungpo (Seoul) Industrial Association.

2. The Export Product Promotion Program

The Korean Export Product Observation Team (also, see Appendix A) visited Hong Kong, Taiwan and Japan to study successful methods of organizing, financing and operating export inspection and testing systems (July-August 1965). Their report has been widely read and many of its recommendations followed. The Report in Appendix A provides detail.

3. Testing Activity In Korea

A measure of the increased and upgraded industrial activity in Korea is found in the 1966 tabulation and character of industrial tests

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performed at NERI.

Completed tests again doubled in 1966 as compared with 1965 and they showed a remarkable shift toward requests for finer tolerances, identification of much smaller percentages of chemical elements in samples and, in general, a sophistication that reflects a real straining toward better in-plant disciplines and controls.

E. RECOMMENDATIONS - WHAT REMAINS TO BE DONE

1. Consolidation of Services

An airmgram to AIB/W on 11 Sept. 1966 has outlined this problem and requested the Agency to represent the three-way NERI-MEI-USOM request for help from the U.S. National Bureau of Standards.

2. The Inspection and Testing Program

It is strongly recommended that USOM press Minister Park of MEI to ask each of the groups mentioned on p. 7 (C,1,e) of the foregoing, to nominate a high level staff member to explore, in an early organizational meeting, ways and means of improving the flow of product information within their own groups and with other interested organizations.

F. FUTURE ACTIVITIES

These have been included in the foregoing Evaluation of Results (p.8, D) and What Remains to be Done (p.9, E) sections of this report for the sake of better context.

II. KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY

A. GENERAL OBJECTIVES

1. History

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The more pertinent developments in recent months, from the viewpoint of this 1966 report, are:

a. Technical Staff Recruiting

On the part of the Battelle Memorial Institute (BMI) there are seven technical staff members in Seoul, as of the end of November, and some half-dozen who have come for short-term, ad hoc purposes and returned to the U.S. Some of these short-term experts are already working with other BMI staff on orientation and training of Korean staff recruited in the States or on other KIST liaison activities, e.g., additional staff recruiting, procurement procedures and problems, technical area definitions, etc.

b. Technical Area Definitions

This has now progressed to the point described in Section B following.

B. SPECIFIC OBJECTIVES

1. Technical Areas

The identification of the first areas to be approached via studies and field trips is in the Status Report (pp. 19-20, Appendix E) as follows:

"Planned for initiation during the next quarter (Oct.-Dec., 1966) are technical economic surveys of the following industrial sectors: ceramics, food technology, construction materials, smelting and refining of metals, machine tool and mechanical industries, synthetic fibers, energy generation and consumption, commercial minerals production and electronics.

2. Staff, Equipment and Buildings

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Since specific line-staff recruiting and equipment and building details are all tied together by the technical areas that will be selected for research and development, much depends on the studies and field trips.

It is hoped that the first building may be completed (exterior) by the end of December 1967, and equipped by the end of June 1968.

C. ACTIVITIES - FAVORABLE AND UNFAVORABLE FACTORS

1. Technical Areas and Staff

The first team of BMI, KIST and industry specialists (in food technology) initiated its study and field trips in November 1966. Also on the team were scientists from Korea and Yonsei Universities in Seoul.

Recruiting Koreans living in the United States now looks very promising, but a survey of Koreans residing in the United Kingdom and Europe indicated a disappointing lack of numbers and qualifications sufficient to make recruiting worth the effort. It is expected, however, that better prospects may be found among Koreans living and working in Japan, where salary competition and repatriation expenses would both be far less than in the U.S., U.K. or Europe.

D. EVALUATION OF RESULTS AND PROGRESS TO DATE

This project is so new that progress to date seems in better context in the preceding "ACTIVITIES" section, where it has been very briefly covered.

E. RECOMMENDATIONS - WHAT REMAINS TO BE DONE

1. Policy

KIST policy regarding fitting into and encouraging the development

of a prosperous and profitable Korean scientific and industrial community is clearly its most important and difficult responsibility.

It is hoped, therefore, that now that some of the more onerous and time-consuming tasks of early organization are better in hand, CY 1967 will see KIST reaching out more and more into ROKG and non-government laboratories, schools, industrial associations and information centers with suggested activities and projects to (a) improve communications, (b) develop better information sources and (c) involve both professional staff and facilities of these extramural organizations in such a way as to identify the most competent.

2. Second Five Year Plan

During the spring of 1966, the Economic Planning Board of the ROKG approached USOM for "nonofficial", informal assistance in the preparation of its ambitious Second Five Year Plan.

IED-I acted to coordinate, edit and submit the Division's contribution to this planning. Considering the organization and contents of the plan as originally submitted to USOM as compared with the final product published in July 1966 (see Appendix F), it is apparent that the USOM input was substantial. Also, while perusal of pages 77-89 of the Plan still indicates the retention of more than a few of the original, elegant ideas and costs, all have been modified and many cut back exactly to USOM's recommendations.

It is hoped that KIST may now, also, be able to give more time to the carefully-drawn outlines of this Plan in to which EPB, MCI, other

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ROK Ministries, industrial and scientific leaders and USOM staff put so much time and effort.

F. FUTURE ACTIVITIES

The delays anticipated to occur as KIST enters a new calendar year are not to be considered extraordinary. Since Korean staff competence and leadership were anticipated, from the beginning, to be the real key to progress, this is simply a facing up to the facts of the situation as one draws closer to it. Such qualities are scant everywhere and Korea is no exception.

Some acceleration may be achieved by more use of "outside help" as previously stated, e.g., USOM, other facilities in Korea, et al, and should be utilized, but this, too, has a limit.

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