GEORGIA INSTITUTE OF TECHNOLOGY
Engineering Experiment Station

PROJECT INITIATION

Date: 9/24/71

Project Title: Investment Promotion/Industrial Development
Project No.: A-1370
Project Director: Nelson C. Wall
Sponsor: Agency for International Development

Type Agreement: Contract No. AID/csd-3354. Amount: $8,800

Reports: Final Report - due 30 days after completion of the program.

Contact Person: Mr. L. E. Stanfield, Contracting Officer
Agency for International Development
Office of Procurement
Contract Services Division
Washington, D. C. 20523

Assigned to Industrial Development Division

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PROJECT TERMINATION

Date August 3, 1972

PROJECT TITLE: Investment Promotion/Industrial Development

PROJECT NO: A-1370

PROJECT DIRECTOR: Nelson C. Wall

SPONSOR: Agency for International Development

TERMINATION EFFECTIVE: December 31, 1971

CHARGES SHOULD CLEAR ACCOUNTING BY: All charges have cleared.

INDUSTRIAL DEVELOPMENT DIVISION

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A PROGRAM OF PROJECT EVALUATION TRAINING
FOR THAI STUDENTS

by

Ben E. James, Jr.
INDUSTRIAL DEVELOPMENT DIVISION

Project A-1370

1971

Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY
Atlanta, Georgia
A PROGRAM OF PROJECT EVALUATION TRAINING
FOR THAI STUDENTS

by
Ben E. James, Jr.

Conducted for the Board of Investment of the Kingdom of Thailand under the sponsorship of the U. S. Agency for International Development

Industrial Development Division
Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY
December 1971
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Background

One of the primary functions of Thailand’s Board of Investment is to grant investment incentives and promotional privileges to new business and industry. To acquire these incentives and privileges, the applicants must prove to the satisfaction of the board not only that they have a high probability of being a profitable operation, but also that the proposed operation will be beneficial to the people of Thailand and compatible with the country's existing economic activity.

In order that the technical capability of the staff of the Board of Investment might be improved, a request was made through the United States Agency for International Development for some specific on-the-job training. This training was to be in the area of project evaluation, with emphasis on cost-benefit analysis. Also requested was training in analyzing and critiquing feasibility studies.

The United States Agency for International Development then issued a training request to the Georgia Institute of Technology’s Industrial Development Division to provide training for two staff members of Thailand’s Board of Investment. A proposal for a 12-week program of instruction was submitted to and subsequently accepted by AID. Mrs. Premnri Katewongse and Mr. Boonkul Changsirivathanathamrong arrived on September 20, 1971, to begin their training.

Approach

In order to provide the best balance between the theoretical and the empirical aspects, it was decided to conduct the training in three concurrent segments. The first of these segments consisted of informal lecture sessions on topics such as economic data acquisition, market analysis, feasibility analysis, plant design, location analysis, organization and management analysis, financial analysis, cost-benefit analysis, and manpower estimation. The second segment consisted of a research project in which the program participants would analyze three feasibility studies which had been previously conducted.

1/ See Appendix 1.
2/ See Appendices 2 and 3.
The analysis would include an in-depth written critique. The third segment consisted of visits to operating industrial plants. These industrial plants were selected after conferring with the students and getting indications of their product interests. Only those plants whose managements indicated that they would freely answer the students' questions were visited.

The students' work week consisted of the following general pattern: four days spent attending lectures in the morning and working on the research project in the afternoon with the fifth day spent visiting industrial operations throughout the state.

Training Process

The training process consisted of three concurrent segments -- lecture, research project, and plant visits.\(^1\)

**Lectures.** For the first four days of the program, the students audited a training program on Community and Area Development. This training program was designed for the economic development specialists of Georgia's rural electric co-ops. The time spent here gave the Thai students a brief overview of regional economic development.

The next lecture series was on acquiring and utilizing economic data. The main objectives of these sessions were to identify the types of economic information the students would be using during the training program and to outline the kinds of information needed in an economic development program and how it should be organized. Along with the instruction, a memo was prepared to provide the students guidance in acquiring economic information from Georgia Tech's Price Gilbert Library and the Industrial Development Division's basic data collection.

A short series of lectures was then given on industrial sites and industrial districts. In these sessions, the importance of adequate sites for possible future expansion was stressed. Also covered was the necessity for proper utilities and services. As part of this lecture series, tours of industrial districts and sites in Atlanta and Macon were conducted. Examples of both good planning and poor planning were pointed out.

\(^1\) See Appendix 4.
An entire week was devoted to covering principles and techniques of market analysis. This material also included a session on locating sources of reliable market information. Under this subject, in-depth studies of wholesale, retail, and industrial markets in the southeastern United States were examined with particular attention to methodology. Some short-term market surveys which had been prepared for private companies and development groups were studied. Also covered were manufacturing opportunity studies that were based on analyses of local industry, raw materials, labor, markets, and similar factors.

The following group of sessions was devoted to feasibility analysis. As with market analysis, the broad subjects covered were principles and techniques and locating sources of information. During these lectures, extensive use was made of various feasibility studies which had been done by the Industrial Development Division. By examining and critiquing these studies, it was possible to explain theory by illustrating useful application. All elements of feasibility analysis were covered. They included market potential, technological capabilities, raw materials and supplies, machinery and equipment, labor supply, optimum plant size, projected growth, channels of distribution, financial assistance, costs, profits, and cash flow.

In order to familiarize the students with the physical facilities required for industrial operations, a series of sessions was devoted to industrial plant layout and design. During these meetings, general topics were covered, including the role of plant layout, plant layouts and the investor, reasons for good layout, layout objectives, factors influencing layouts, and types of layouts. A field trip to a local manufacturing facility was included as part of this topic.

The next week of instruction was divided into two major segments -- economics of industrial plant location from the community point of view and economics of industrial plant location from the industry viewpoint. First, a frame of reference was established in which the philosophy and practice of industrial development in the United States was defined. After certain premises and assumptions were agreed upon, the discussions moved into economic development in an international sense. At this particular session, it was pointed out that the approach to stimulating industrial growth by a nation with a high level of economic well being is quite different from the approach by a very poor nation.
During these sessions, some major factors influencing industrial plant location were examined in detail, such as how companies analyze markets and market penetration. How the labor supply affects plant location also was illustrated. It was pointed out that not only numbers of people, but also skills and training, wage rate differentials, and related labor demands were taken into consideration by the management of a company involved in the task of seeking a new location.

From the community viewpoint, it was shown that the fundamental objectives of industrial plant location were to create new jobs, to expand economic opportunity, to raise the standard of living, and to better utilize local resources.

In order for the students to get some insight in the way a company develops its unique corporate personality, several sessions were presented on corporate organization and management. Topics covered included descriptions of how industrial organizations work, the principles of operation, and the advantages and disadvantages of various types of organization. Also, an analysis of line and staff organizations was made in terms of functional responsibility, spans of control, and levels of structure. Elements of ideal organization structure were covered in detail as examples of procedural items found in well-managed companies. It was pointed out that in evaluating a company organization and management, the presence or absence of these items were indicators of the quality of company planning and coordination. The students were familiarized with factors which need to be examined in evaluating company management. The weighted point system used by the Small Business Administration in its lease guarantee program was analyzed in detail to demonstrate that a quantitative approach to management evaluation is feasible.

The next series of lectures involved the general subject of financial analysis. During these sessions, the current methodology in financial analysis was covered, with special emphasis on the applicability of these methods to the analysis of investment proposals which are received by the Thai Government. In doing this, special attention was given to the analysis of a broad spectrum of industries with varying ownership forms. During these sessions, in addition to informal lectures, visits were made to a certified public accounting firm and a commercial banking firm for brief presentations by their professional staffs. Discussion topics included international investment, review of financial statements and terminology, and financial analysis (in which ratios, sources of
comparative data, and types of ratio analysis were explained). Also covered were cash-flow statements, derivation of cost data, and financial analysis and audit procedures.

For the next session, a brief series of presentations on cost/benefit analysis was combined with case studies. These case studies were based on actual projects which had been completed. One of these projects involved a detailed study for the establishment of a foreign trade zone in a southern seaport.

The final subject covered in the lecture series was manpower requirements for industry. Special emphasis was put on manpower items that are normally included in investment proposals. General topics covered included human resources, manpower resources analysis, education and training, developing manpower resources, and techniques in developing new manpower resources information.

Research Project. For the students' research project, it was originally planned to have them conduct a feasibility study for a proposed business operation. Instead, it was ultimately decided to have them review, analyze, and criticize three feasibility studies which had already been conducted. These studies were selected so as to give the greatest range of experience to the students.

As part of this research project, one of the professional staff of the Industrial Development Division was assigned as advisor. During the course of the project, he not only was available to answer questions and provide assistance, but he also provided considerable informal instruction.

One of the students was able to review, analyze, and criticize all three of the selected studies, while the other student, because of a hand injury, was able to complete only one. Their evaluations are presented in Appendices 5-8, and the feasibility studies which they critiqued are included as Appendices 10-12.

In general, the students did a thorough job in their evaluation of these studies. While their approach in evaluation was somewhat different from that of our professional staff, it was felt that this was primarily due to our role as feasibility study constructors and the Thai students' role and responsibilities as feasibility study evaluators.
Plant Visits. In order to give the students a better bridge between theoretical and practical considerations, they were taken on a series of visits to industries in Georgia.1/ Before any visits were arranged, the students were consulted as to the types of industry in which they were most interested. Fortunately, most of the types of industry which they expressed interest in visiting were available in the state. These industry groups were then screened to determine which production operations were the most modern. Also considered was the responsiveness of the management of each company to such a visit. In practically all cases the visits through the industrial plants were conducted by members of the management team, who were not only articulate, but also openly receptive to all questions by the students. Escorting the students on all visits were technically trained members of the Industrial Development Division's professional staff.

During informal discussions with the students, it was evident that they considered the plant visits a very beneficial segment of the training program.

A brief review of each plant visit is given below.

1. Fulton Cotton Mills, Inc., Atlanta, Georgia -- This plant produces burlap and cotton domestic. While the facility was somewhat disappointing to the students because of its age, it provided a good insight into one of the problems now confronting the American textile industry.

2. Integrated Products, Inc., Rome, Georgia -- This company starts with raw synthetic fiber and by spinning, converts it to yarn used by the carpet industry. It provided a good example of a modern facility run by an excellent management team.

3. Trend Mills, Inc., Rome, Georgia -- Trend is one of the most modern carpet plants in Georgia. It has one of the first continuous silk-screen pattern dyeing systems in the South.

4. Macon Shirt Company, Macon, Georgia -- This is a typical well-managed cut and sew operation.

5. Bibb Manufacturing Company, Macon, Georgia -- The facility visited is only one of the many operations of this company. In contrast to the first textile plant visited, it is a very modern mill which produces cotton percale.

1/ See Appendix 9.
6. General Electric Company, Atlanta, Georgia -- As part of the sessions on plant layout and design, this department of the General Electric Company, manufacturing electrical switchgear, was visited as an illustration of good functional manufacturing layout.

7. General Electric Company, Rome, Georgia -- This department of G. E. provided an excellent example of heavy industrial manufacturing. Its product is electrical transformers ranging up to 50,000 kva in size. The facility also shows an imaginative product-type layout.

8. D. J. Manufacturing Company, Rome, Georgia -- This company provided the students with a good example of a small specialty non-ferrous foundry. It was in sharp contrast to some of the large facilities previously visited.

9. Southwire Company, Carrollton, Georgia -- This company is a large, well-managed wire producing facility. The students were able to see an integrated operation, starting with copper refining and continuing through drawing, then to the final coating and spooling.

10. Ford Motor Company, Atlanta, Georgia -- This assembly plant was chosen so that the students could see highly automated and mechanized processes in action. With a plant of this type, it is possible to acquire an appreciation of the tremendous capital investment required to mass-produce heavy consumer goods.

11. Sweetheart Plastics Corporation, Conyers, Georgia -- This was a good example of a modern plastics forming facility. As with the previous company, it illustrated the extensive heavy machinery required to mass-manufacture consumer goods.

12. Wallace Hatchery, Douglas, Georgia -- In order to comply with the students' request for information on Georgia's poultry industry, a series of visits to its various segments was arranged. The first of these visits was to a hatchery. This particular hatchery produced chicks for the egg-producing facilities. It was interesting to the students that the company employed Japanese chick sexers and destroyed all the male chicks.

13. Poultry Health Service, Inc., Douglas, Georgia -- This company allowed the students to visit two types of facilities: an egg-laying operation and a broiler-raising operation. Both of these were mechanized and gave the students some indication of the investment required for egg and broiler production.
14. Swift & Company, Douglas, Georgia -- This plant is a highly mechanized broiler-processing operation, covering all stages from slaughtering through eviscerating to final packaging. This was a good example of a facility which operates on an extremely small profit margin.

15. Douglas Foods, Inc., Douglas, Georgia -- In this operation, laying hens which have fallen below minimum egg production are slaughtered and processed. This process includes cooking, rendering chicken fat to be used for flavoring, deboning, and canning. The company management was interested in exporting and spent considerable time talking with the Thai students.

16. Union Camp Corporation, Savannah, Georgia -- This company has the largest integrated kraft container operation in the world. The students were able to see long pine logs and pine cordwood converted to pulp, then to paper, and finally to various types of containers. This operation was pointed out as an example of how much investment is required not only to produce a product, but also to eliminate and control pollutants.

17. Southern States Fertilizer Company, Savannah, Georgia -- This plant is a typical fertilizer manufacturing operation. By being situated in a seaport, it has facilities for bulk materials handling from oceangoing vessels.

18. Kendall Company, Augusta, Georgia -- This plant, which produces surgical dressings, provided a good example of high-volume production which combines automatic packaging machinery with extensive labor.

19. Babcock & Wilcox Company, Augusta, Georgia -- This plant manufactures both clay and non-clay refractory products. Both its handling facilities and products were of interest to the students.

20. International Chemicals & Minerals Company, Augusta, Georgia -- This is another fertilizer manufacturing operation. While the production process is similar to that of a fertilizer plant previously visited, this plant operates in a river port and is geared to river barge and rail transportation.

21. Altair Homes, Inc., Americus, Georgia -- This operation was visited as an example of an industry with recent rapid growth. It was also pointed out to the students that this type of operation traditionally has a very low investment to sales ratio. The plant also was used to exemplify an industry which is able to utilize low-skilled and marginal labor.
22. Lilliston Corporation, Albany, Georgia -- This producer of farm machinery was visited to point out a well-managed heavy agri-industry.

23. Firestone Corporation, Albany, Georgia -- This ultramodern tire manufacturing facility has been in operation for only two years; consequently, the students were able to see the most recent developments in tire manufacturing processes. They exhibited strong interest in this operation based on the rubber-producing capabilities of their country.

Results

It was the consensus of the professional staff of the Industrial Development Division that the main objectives of the training program had been met. By achieving a realistic balance between plant visits and lectures, it was felt that the two students will have a much better approach to analyzing investment proposals submitted to their country.

Even though their research project had no real application as far as the economy of Thailand was concerned, the students were able to analyze a real feasibility study without the pressures associated with a real situation. Their analyses, in general, showed a good capability for this type of task. Unfortunately, since no testing preliminary to the training program was conducted, it is impossible to state to what degree the training program was responsible for the students' favorable execution of the research project.
APPENDICES
### The Board of Investment views foreign training as an important element in upgrading all phases of staff performance. It must be noted that the staff of the Board, particularly the Grade 2 and 1 officials, are required to (1) handle a variety of highly sophisticated matters, very few of which can be considered routine, and (2) deal regularly with very knowledgeable investors of all nationalities very frequently in the English language. This means that most of the BOI higher officials have some foreign education. It also means that on-the-job training is very important in efforts to improve staff capability.

The on-the-job training requested in this PIO/P should involve the selection, preparation and evaluation of private projects in the industrial sector as they are affected by government policies and regulations. It should combine general material designed to provide a background for the analysis of industrial projects with various studies of: financial statements, estimating costs and manpowere requirements, controlling the execution of projects, location and market analysis, the evaluation of organization and management, capital market and the role of development banks, and problems in project evaluation from the point of view of the national economy.

### Training of the type called for in this PIO/P is not available in Thailand. The training herein proposed does not conflict with or duplicate training available from UN agencies, USIA, the Colombo Plan or other sources.

### Names of participants, kinds of training needed and method of carrying out. Relative emphasis to be given various phases. Problems which this training is intended to solve.

<table>
<thead>
<tr>
<th>Participants</th>
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<tbody>
<tr>
<td>1. Mrs. PREMSRI Katewongse</td>
<td></td>
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<tr>
<td>2. Mrs. WONGMUO Ranong</td>
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</table>

Mrs. PREMSRI Katewongse and Mrs. WONGMUO Ranong are responsible for reviewing applications for investment incentives under the Promotion of Industrial Investment Act and undertaking studies of industrial projects in order to prepare and submit reports to the BOI committees. Industries of particular interest to the participants are Textile, Sanitary ware, Paper, Artificial leather, Household electrical appliances and Synthetic fiber.
Mr. Boonkul Changsirivathanathamasong is responsible for analyzing and evaluating industrial projects applied for promotional privileges. Industries of particular interest to the participant are Petro-Chemical, Fertilizer, Aluminum, Garment, Steel, Machinery, Machine tool, Paper, Textile, and Household electrical appliances.

The proposed on-the-job training program is requested as follows:

a) Tools and techniques of project evaluation; the measurement of economic and financial costs and benefits; the uses and limitations of cost benefit analysis.

b) Feasibility studies: project preparation, management and organization, raw materials to be used and its processing; special problem of project implementation and control.

c) Pricing and foreign trade problems related to investment projects.

d) Industrial legislation; tax incentives; government guarantees to investors; tariff protection for existing industry.

The type training involved might be that available from organizations such as a State Development Agency or Consulting organization.


The participants will return to resume their responsibility at the Board of Investors and carry out more effective activities, particularly in industrial promotion.

21. Participant's Future Employment—State what reasonable assurance has been given the mission that the applicant will, upon completion of the training, return to the position he left, a similar position, or superior one.

Participants have signed an agreement with their government to remain in its service after their return, for a period of at least one year or twice the period of training whichever is greater. In signing the draft copy of the PIO/P the Thai officials concerned have agreed that during such period after their return the participant will be employed on project related activities in the geographical area of most urgent need, unless in a particular case USCH and DITC specifically agree that a different assignment will better serve the development needs of Thailand. An assignment or transfer of a returned participant without regard to the foregoing policy consideration carries with it an obligation to repay the cost of the training program to the project, and jeopardizes future project training.
Appendix 2

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
PARTICIPANT BIOGRAPHICAL DATA

PART I - TO BE COMPLETED BY MISSION

1. Cooperating Country
   Thailand

2. PIOP Number
   493-161-1-0027

3. Project/Activity No. and Title
   PRIVATE SECTOR DEVELOPMENT, 493-11-290-161
   (Industrial Techniques)

4. Desired Starting Date
   November 1970

5. Location and Duration of Training
   U.S., 16 WEEKS, THIRD CITY

6. Attachments
   □ TRANSCRIPTS
   □ DEPENDENT CERTIFICATION
   OTHER (Specify)

7. A. Future Employment
   □ GOVERNMENT   □ PRIVATE   □ JOINT

7. B. Category/Occupation Code
   5-D Economist

7. C. Economic Activity Code
   41-b Industrial Techniques

Languages Proficiency - TO BE COMPLETED FOR ALL PARTICIPANTS

A. Tests Scores and Ratings

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B. Language Proficiency Status
   □ TEST NOT YET GIVEN   □ WAIVED   □ RETEST NECESSARY

C. Indicate Approximate Date Scores or Rating to be Reported

D. Indicate Type of Written and Oral Reasons and/or Authority
   □ COUNTRY
   □ INTERPRETERS TO BE PROVIDED
   □ LANGUAGE ABILITY QUESTIONED
   □ SPECIAL PROGRAM

E. Indicate Appropriate Rating
   IN HOME COUNTRY
   IN RECEIVING COUNTRY

PART II - TO BE COMPLETED BY PARTICIPANT

A. Name (Mr., Mrs., Miss) (Correct and underline the one name by which you wish to be called)
   Mrs. PREMELI Katerongae

B. Address
   6/26 Soi AkRon, Ladprao Road, Bangkok

C. Date of Birth
   March 27, 1937

D. PIOP Number
   493-11-290-161

E. Place of Birth
   Bangkok, Thailand

F. Sex
   □ MALE   □ FEMALE

G. Place of Citizenship
   Thailand

H. Name of Spouse
   Mr. ABANTA Katerongae

I. Date of Marriage
   August 6, 1935

J. Nationality
   Thailand

K. Date of Birth
   (Month, Day, Year)

L. Place of Birth
   (City, Country)

M. Place of Citizenship
   Thailand

N. Occupation
   Economist

O. Years of Experience
   10

P. Language Proficiency
   Thai

Q. Special Qualifications
   A. U.S. Membership and Offices in Professional Societies
   B. List Publications, Honors, Awards

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**1. To review application for investment incentives under the Promotion of Industrial Investment Act.**

**2. To undertake studies of industrial projects in order to prepare and submit reports to the BOI Committee.**

**3. To follow-up the effects of the promotional industries and evaluate them to the whole economy.**

**4. To study and prepare of the National Economic and Social Development Plan.**

**5. To collect and make the projection of the central government finance to enable the development process to meet the target, cooperating with the Bureau of Budget and Ministry of Finance.**

**6. To collect and make the projection of the central government finance to enable the development process to meet the target, cooperating with the Bureau of Budget and Ministry of Finance.**

**7. To collect and make the projection of the central government finance to enable the development process to meet the target, cooperating with the Bureau of Budget and Ministry of Finance.**

**8. To collect and make the projection of the central government finance to enable the development process to meet the target, cooperating with the Bureau of Budget and Ministry of Finance.**

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**Travelling, Sports:**

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**Signature:**

Joseph W. Kovach

Training Officer

Date: August 31, 1970
### PARTICIPANT BIOGRAPHICAL DATA

**PART I** - TO BE COMPLETED BY MISSION

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### SPACE FOR PHOTOGRAPHS

ATTACH 5 PHOTOS (2\(\times\)2\(\)"").

DO NOT STAPLE OR GLUE.

Participant's Name And
PIO/P Number Should
Appear On Reverse Side
Of Each Photograph.

### Language Proficiency

#### TO BE COMPLETED FOR ALL PARTICIPANTS

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| 2. Proficiency in Other Language(s) for Third Country Training |

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<tbody>
<tr>
<td>Secret</td>
<td></td>
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</table>

### Future Employment

<table>
<thead>
<tr>
<th>7. A. Future Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
</tr>
<tr>
<td>Private</td>
</tr>
<tr>
<td>Joint</td>
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</tbody>
</table>

### Language Proficiency Status

- TEST NOT YET GIVEN
- WAIVED
- RETEST NEEDED

#### Other Language(s) for Third Country Training

<table>
<thead>
<tr>
<th>Language(s) Date Given</th>
<th>Speaking</th>
<th>Reading</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Secret</td>
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</table>

### Further Language Training Is Necessary

#### Language Ability

- UNQUESTIONED
- SPECIAL PROGRAM

### Part II - TO BE COMPLETED BY PARTICIPANT

<table>
<thead>
<tr>
<th>7. A. Name of Spouse</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5 D Economist</td>
<td>41 b Industrial Techniques</td>
</tr>
</tbody>
</table>

### Personal Data

<table>
<thead>
<tr>
<th>8. Name (Mr., Mrs., Miss) (Capitalize and underline the one name by which you wish to be called)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Boonsil Chansiriwatanathamrong</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Dietary Restrictions (e.g., No Pork, No Beef, No Meat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

### Address

<table>
<thead>
<tr>
<th>5. Address (Street, City or Town, Province) and Telephone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 Soi Somprasong 2, Petchburi Road, Bangkok, Thailand</td>
</tr>
</tbody>
</table>

### Date of Birth

<table>
<thead>
<tr>
<th>6. Place of Birth (City, Country)</th>
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</thead>
<tbody>
<tr>
<td>Bangkok, Thailand</td>
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</tbody>
</table>

### Additional Information

<table>
<thead>
<tr>
<th>10. Person(s) To Be Notified in Case of Emergency (Name, Address, Relationship, Telephone No., if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. In Host Country</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. If You Have Lived or Traveled in any Country Other Than Your Own, Complete the Following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Country</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Philippines</td>
</tr>
</tbody>
</table>

### Special Qualifications

<table>
<thead>
<tr>
<th>12. Special Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. List Membership and Offices in Professional Societies</td>
</tr>
</tbody>
</table>

The Economic Society of Thailand

<table>
<thead>
<tr>
<th>B. List Publications, Honors, Awards</th>
</tr>
</thead>
</table>

(May 1966)
To analyze and evaluate industrial projects applying for promotional privileges identifying industrial projects which contribute to the economic growth of the country, carrying out feasibility studies studying appropriate level of tariff protection, and providing consultative service and pertinent information for potential inventors.

15. Previous Employment
A. Exact Title of Your Previous Position or Occupation
B. Dates of Employment (Month, Year)
C. Number and Kind of Employers you supervised
D. Name and Address of Previous Employer (Ltd. Government Agency, Educational Institute)
E. Kind of Business or Organization
F. Size (Approximate number of employees)

16. Other Employment (Use continuation sheet to enter other full-time employment for previous 10 years)

17. Activities or Hobbies in Which You Are Interested (e.g., Music, Art, Sports)

Reading, Newspaper, Travelling and Sport.

18. SIGNATURE

BEFORE SIGNING THIS FORM CHECK TO MAKE SURE THAT YOU HAVE ANSWERED ALL QUESTIONS CORRECTLY.

I CERTIFY that I have reviewed the information made in this application and that they are true, complete, and correct to the best of my knowledge and belief and are made in good faith. I further agree that if I am accepted into said program, I will follow diligently the program arranged to be conducted by my government and will not seek compensation of the period of my program. I further agree that upon completion of my training, I will return to my country without delay and will endeavor to utilize, for the benefit of my economy, the training acquired under this program.

Signed in draft:

May 15, 1970

DATE

Joseph E. Kovach

Signature of Mission Official

Training Officer

August 31, 1970

Official Title

Note: MISSION Personnel to check entries of Training copies as required by Annual Order 18572.
Appendix 3

INDUSTRIAL DEVELOPMENT DIVISION
GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA

INFORMATION AND SUGGESTIONS
FOR INTERNATIONAL VISITORS

Your address while at IDD is as follows:

Mr. ______________________
Industrial Development Division
Georgia Institute of Technology
1132 W. Peachtree St., N. W.
Atlanta, Georgia 30309

Postal Delivery

Mail is received at the office twice a day, in the morning and in the afternoon. Your daily mail will be put in the mail box in your offices.

Post Office

The closest post office is located at 98, 14th Street, N. W., approximately three blocks away from the office.

Postal services at this location include sale of stamps, registered mail, special delivery, delivery of packages, etc. Mailing rates vary for various areas of the world and you can find out at the post office what the appropriate rate is for your country. This post office is open from 8:30 a.m. to 5:00 p.m. daily, except Saturdays and Sundays.

Bank Services

Any bank in Atlanta will accept checks of the United States government if you present the usual identifications, such as your passport or AID's ID card.

The bank closest to the office is:

C & S National Bank
1088 Peachtree St., N. E.
Hours: 9:00 a.m. - 4:00 p.m. (Monday - Friday)
Travelers Checks

Travelers checks are accepted everywhere as equivalent to cash, upon appropriate identification. They can be obtained in any bank for a charge of 1%.

Telephone Usage

Our telephone number in the office is (404) 873-2931. When calling outside, dial "9" first and wait for the dial tone before placing your call.

In the initial pages of the telephone book you can find instructions to place long-distance calls. Rates vary according to the hour and are lower during the night and on Sundays. Any member of our staff can assist you in placing a long-distance call. Keep in mind that it may take a few hours to put a call through to some countries; therefore, it is usually convenient to place overseas calls with some anticipation. It is important to indicate that, due to the administrative structure of IDD, long-distance calls should not be placed using our telephone number.

Bus Services

The transportation map enclosed with the present information shows bus routes within the city and toward the suburban areas. Usually, the signal indicative of a bus stop is in the sidewalk close to the corresponding intersection; it is a rectangular red and white sign reading "bus stop" or "coach stop", or a yellow poster reading "bus stop." In the corner of the office there is a bus stop in both directions. Unfortunately, bus schedules are seldom indicated at bus stops. The present information package also includes the schedule for route 23, which can be taken in front of the office either south (i.e., toward downtown Atlanta) or north (i.e., toward Lenox Square). Schedules of other routes are also available if you need them. When taking a bus, you pay the fare by depositing the EXACT change in a coin machine located beside the bus driver. It is important to have the exact change, because the driver does not have change with him. Local fares are 40 cents. You can obtain transfers to other routes for 5 additional cents.
Housing

The place where reservations have been made for you has been chosen for its convenience and economy. Nevertheless, it is not necessary that you stay there if for any reason it does not satisfy you. Other possibilities include houses, apartments and/or efficiencies, hotels, etc. In any case, it is necessary for you to decide where you want to stay before signing the rental agreement (or contract), since non-fulfillment of the contract may imply losing your deposit and may cause inconvenience to persons attending our internships in the future and willing to make housing arrangements in that place. Our experience from previous programs indicates that you should stay close to the office for reasons of distance, economy and proximity to your fellow interns.

Churches

Information related to religious services in Atlanta can be obtained from the Saturday edition of local newspapers under the section "religion". The information provided includes a list of churches and schedules of services. Addresses and telephone numbers of all religious institutions can be found in the yellow pages of the telephone book, under "churches".

Consulates and Legations

Some countries maintain consulates or legations in the city of Atlanta. The addresses and telephone numbers can be found in the telephone book under the name of the country. A list of the consulates and information services of your country in the United States can be obtained through your embassy in Washington.

Personal Services

Laundry and dry cleaning: both services are usually offered in the same place, with a time lag of approximately three days. In some places the clerk gives you a receipt for your clothes; in others he simply takes your name and address. If you need the clothes urgently, it is possible to ask for a one-day service. In this case, you should take the clothes to the laundry early in the morning, so that it can be ready by late afternoon. Ask for the price first, for this quicker service is usually more expensive.
Automatic Laundries

These laundries are frequently called "laundromats", but in the telephone book they appear under "laundry - coin operated". Some remain open 24 hours. The clients can use the washers and dryers themselves, using coins of 25 cents and 10 cents, respectively. The process takes approximately one hour, and you must wait in order to retrieve the clothes from the machines. In most places they also have selling machines for detergents, etc., in measures appropriate for the machines. In the ground floor of the building located on the corner of Crescent and 13th Street there are washers and driers. This equipment belongs to the apartment building and is available for your convenience.

Valet Services

These are places which offer a wide variety of services, including dry cleaning, cleaning and fixing of hats, clothes, etc. The staff at the office can give you some orientation on these matters, as you need them.

Where to Buy

Obviously, a newcomer to the United States has a difficult time spending his money in the most economical manner, at least until he becomes accustomed to the new monetary system and the prices of various products, as well as the places where better prices can be obtained.

In the business system of the United States, customers do not usually bargain for better prices in commercial stores. In each store, prices are fixed and the products marked accordingly. However, you will notice that the same or similar articles may cost more or less in different stores. It is good practice to compare prices in different stores before buying something. Advertisements in the newspapers are useful for price comparisons and for detecting "specials", i.e., sales of articles at reduced prices.

The most important commercial area of Atlanta is certainly the downtown area, where you will find the great stores, and also many smaller ones specializing in certain articles such as cameras, books, etc. The larger department stores sell all different kinds of merchandise, from needles to electric appliances for the
In the ground floor (budget shop or basement) they sell cheaper merchandise. Although the schedule varies, stores are generally open from 9:30 a.m. to 6:00 p.m. daily except Sundays. Many stores remain open on Mondays and Fridays until 9:00 p.m.

Some persons prefer to do their shopping in the so-called "shopping centers". Lenox Square is probably the biggest shopping center in the city of Atlanta, and is approximately 10 minutes away from the office (see map for bus route 23).

Recreation

In the amusements sections of the local newspapers you can find schedules and programs of theaters, movies, concerts, night clubs, etc. Sport activities such as baseball, football, basketball, etc., are described in the sports section. The IDD staff can advise you on how to buy tickets for these recreational activities. Furthermore, they can recommend the restaurants and night clubs they prefer. The Sunday edition of the newspapers describes amusement activities for the next week.

It is important to keep in mind that a regulation of the city of Atlanta requires use of suit and necktie in night clubs and many restaurants after 8:00 p.m.

Drugstores

Frequently, they are a combination of pharmacy and cafeteria. Generally speaking, they have any product you may need from any of the established laboratories. If the desired product is out of stock, they usually order it for you without additional charge; this process may take 1 or 2 days. It is necessary to keep in mind that a prescription is necessary here in the U.S. to obtain certain medicines. In such cases you must visit a doctor in order to obtain the prescription.

Hawk's drugstore, convenient for its proximity, is located at the corner of N. Peachtree and 14th Street and is open Monday through Saturday from 7:00 a.m. until 10:30 p.m., and on Sundays from 9:00 a.m. to 10:00 p.m.
Medical Assistance

In case you need medical assistance while in Atlanta, the following doctors have attended some of our previous interns.

Dr. Mario Machado
Internal Medicine
2718B Felton Dr.
East Point, Georgia  Tel. 762-5541

Dr. Juana Munoz
Pediatrician
2732B Felton Dr.
East Point, Georgia  Tel. 762-8837

Dr. Jose Lerer
Dentist
Doctor's Building
Telephone 523-8495

If you need to visit a specialist, our staff shall be glad to assist you in locating an appropriate one.

In Cases of Emergency

In cases of emergency, get in touch immediately with one of the IDD staff members listed below:

Nelson C. Wall                       Ben E. James
965 Berkshire Rd., N. E.          2804 Payton Rd., N. E.
Atlanta, Georgia 874-1302               Atlanta, Georgia 633-2425

If for any reason you are planning to leave the city, it is important you let one of these persons know beforehand where you are going and how to locate you if necessary.
### Appendix 4

**THAI SPECIAL TRAINING PROGRAM**

<table>
<thead>
<tr>
<th>Week</th>
<th>Subject Areas</th>
<th>Hours Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 20-24, 1971</td>
<td>Industrial development indoctrination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orientation - Hammond, Lewis, Sund, James</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Housing - Gutierrez</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Participation in seminar - Community/Area Development Training Program - Cassell (Sund)</td>
<td>32</td>
</tr>
<tr>
<td>Sept. 27-Oct. 1, 1971</td>
<td>Information needs and systems - Anders</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Industrial sites and districts - Dodson/Sund</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Preliminary selection - research project</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Hammond/Cassell/James</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant tour - industrial districts</td>
<td>8</td>
</tr>
<tr>
<td>Oct. 4-8, 1971</td>
<td>Market analysis - Woodard (Chiang)</td>
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<tr>
<td></td>
<td>Principles and techniques of market analysis</td>
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<tr>
<td></td>
<td>Sources of information</td>
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<tr>
<td></td>
<td>Research project (cont'd)</td>
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<tr>
<td></td>
<td>Plant tour - Atlanta area</td>
<td>8</td>
</tr>
<tr>
<td>Oct. 11-15, 1971</td>
<td>Feasibility analysis - Woodard (Chiang)</td>
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</tr>
<tr>
<td></td>
<td>Principles of feasibility analysis</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Techniques of feasibility analysis</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Sources of information</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Research project (cont'd)</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Plant tour</td>
<td>8</td>
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<tr>
<td>Oct. 18-22, 1971</td>
<td>Plant design and layout - Kroner</td>
<td>16</td>
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<tr>
<td></td>
<td>Research project (cont'd)</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Plant tour - Atlanta area</td>
<td>8</td>
</tr>
<tr>
<td>Oct. 25-29, 1971</td>
<td>Location analysis - Cassell (Sund)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economics of plant location - community viewpoint</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Economics of plant location - industry viewpoint</td>
<td>8</td>
</tr>
</tbody>
</table>
Nov. 1-5, 1971
Research project - (cont'd) 16
Plant tour - Carrollton area 8

Nov. 8-12, 1971
Organization and management analysis
Lewis/Hammond (Ward)
   Analysis of organization structures 4
   Analysis of management structures 4
   Evaluation of O & M 4
Research project (cont'd) 8
Plant tours - N. E. Georgia area 16

Nov. 15-19, 1971
Financial analysis - Taylor (Woodard)
   P & L Statement 4
   Balance sheet 4
   Ratios 8
   Cash flow 8
   Capital requirements 4
   Financial structure 4
Research project (cont'd) 8
Plant tours - South Georgia 16

Nov. 22-24, 1971
Cost benefit analysis - Ulmer/Murphy 16
Research project (cont'd) 8
Plant tours - S. E. Georgia area 16

Nov. 29-Dec. 2, 1971
Principles of feasibility and market analysis - Diamond 16
Research project (cont'd) 16

Dec. 6-8, 1971
Research problem 8
Program summary and review 8
Evaluation

Using the generally accepted outline for a feasibility study as a guide for evaluating the study about a proposal for a wood manufacturing complex at Camak, Georgia, with two auxiliary operations located at Lumber City and Riceboro, Georgia, I think that this particular study also should have covered and analyzed the impacts of the following subject matter in detail:

1. The projected trend in the size of the regional market for each product. (The study projected the trend for wood particleboard only.)

2. The production capacity of the county and region for each product. (In the study, only the production capacity for wood particleboard in the county is given.) The production capacity of the region is important because most of the products will be supplied to the regional market.

3. Will the current and future markets absorb the production of a new plant without price cutting or other dislocations? This question is very crucial because if there will be price cutting to a great extent, then it might not be worthwhile to carry out the project.

4. Utility requirements (power, gas, water) and cost. This is essential information for calculating manufacturing cost.

5. Consumer taste, price, quality of competing goods and possible development of substitute goods, especially in the case of oak flooring and wood particleboard. These factors can determine whether the project will be viable.

I. Background, Historical Development, and General Characteristics of the Industry

A. The growth and stability of the industry.

According to the study, the industries under consideration have a record of steady growth, except in the case of the oak flooring industry. The oak flooring industry has been associated largely with new housing starts and thus has suffered from the downswing in new housing starts in 1965 and 1966 and the keen competition from carpeting materials for the floor covering market in recent
years. However, the long-term outlook for oak flooring appears to be good.

E. Have there been any significant technological changes within the industries?

According to the study, there have been no significant changes within the industries.

II. Market for the Products

A. Is there already a demand for the products?

1. What is the size of the total U. S. market?

According to the study, the size of the total U. S. market for each product is as follows:

a. Softwood lumber -- about 20-30 billion board feet a year
b. Oak flooring -- about 654 million board feet a year
c. Wood particleboard -- about 1,134 million square feet a year
d. Wood chips -- about 13.2 million cords on a 128-cubic foot roughwood basis
e. Prefab houses -- about 233,000 units

2. Who are the principal consumers?

According to the study, the principal consumers are:

a. Woodworking industries for southern pine lumber
b. Housing starts for oak flooring
c. Furniture plants and woodworking corporations for wood particleboard
d. Pulp and paper mills for wood chips
e. Home builders for prefab houses.

3. Who are the possible new consumers?

Not examined in the study.

4. Are products novelty items; are they likely to suffer from obsolescence -- technological or otherwise?

According to the study, these products are not novelty items.
5. What is the size of the export market?

According to the study, there is no export market for these products except in the case of southern pine lumber, where 2% of the production is exported.

6. What is the projected trend in the overall market size?

According to the study, the projected trends are as follows: oak flooring (projected by market analysts), 1 billion board feet a year by the early 1970's; wood particleboard (projected by Columbia Engineering Company, Ltd.), 1,430 million square feet (3/4-inch basis) in 1970 and 2,090 million square feet (3/4-inch basis) in 1975; and wood chips (projected by the writer on the assumption that wood chips constitute 30% of all pulpwood production in 1970 and 35% in 1980), 56.5 million cords in 1970 and 77 million cords in 1980. No projections were given on southern pine lumber and prefab houses.

B. Are the products oriented to regional markets?

1. How do the location of production facilities and the location of markets compare?

According to the study, the production facilities and the markets will be near each other except for oak flooring, which can be shipped nationwide because more than 95% of all hardwood flooring produced in the United States comes from the southern and Appalachian regions.

2. What constitutes the geographic dimensions of the market that can be served from the location involved?

According to the study, the geographic extent of the market is determined by the availability of raw materials and transportation cost.

3. What is the size of the regional market?

According to the study, the size of the regional market for each product is as follows:
a. Southern pine lumber -- about 4.5 billion board feet (70% of 6.5 billion board feet production)
b. Oak flooring -- about 20 million board feet
c. Wood particleboard -- about 248 million square feet
d. Wood chips -- 2.8 million cords on a 128-cubic foot roughwood basis
e. Prefab houses -- about 8,000 units.

4. What is the projected trend in the size of the regional market?

According to the study, the projected trend in the size of the regional market for each product is as follows:

a. Southern pine lumber -- no projection is available
b. Oak flooring -- no projection is available
c. Wood particleboard (projected by Columbia Engineering Co., Ltd., September 27, 1967) -- 514.6 million square feet, 3/4-inch basis, in 1970 and 782.7 million square feet, 3/4-inch basis, in 1975
d. Wood chips -- no projection is available
e. Prefab houses -- no projection is available

C. Is penetration of the market possible?

1. How is the demand for the product now being satisfied?
   a. What is the U. S. production capacity?
      According to the study, the U. S. production capacity of each product is as follows:
      (1) Southern pine lumber -- not available
      (2) Oak flooring -- not available
      (3) Wood particleboard -- about 1,290 million square feet
      (4) Wood chips -- not available
      (5) Prefab houses -- not available

   b. What percentage of the U. S. (regional) market is supplied by imports?
      According to the study, there are no imports.

   c. What is the existing level of tariff protection?
      It is not examined in the study.

2. What are the major factors in product sales?
   a. Price vs. quality
      (1) Southern pine lumber -- price is a major factor, especially transportation costs
b. Technology vs. merchandising

1. Southern pine lumber -- merchandising is one of the major factors
2. Oak flooring -- not examined in the study
3. Wood particleboard -- technological development is one of the major factors
4. Wood chips -- technological development is one of the major factors
5. Prefab houses -- technological development is one of the major factors

3. Will current and future markets absorb production of a new plant without price cutting or other dislocations?

The subject is not examined in the study.

4. Is brand name important?

It is not examined in the study.

III. Distribution and Shipping

A. Do distribution facilities for the product exist in the market to be served?

According to the study, rail and truck facilities do exist.

B. Will the products be sold to wholesalers, retailers, consumers, or government facilities?

1. Southern pine lumber -- direct sale to consumers
2. Oak flooring -- not specified in the study
3. Wood particleboard -- wholesale
4. Wood chips -- direct to consumers
5. Prefab houses -- direct to consumers

C. What shipping practices are common to the industry?

Not examined in the study.
IV. Availability of Raw Materials

A. What are the primary (secondary) raw materials?

The study specifically points out that pine logs and oak logs will be the primary raw materials for making 36.6 million board feet of finished pine lumber, 15 million board feet of oak flooring, 22 million square feet of wood particleboard on a 3/4-inch thickness basis, 1,000 units of prefab houses, and 118,165 tons of wood chips a year. Particleboard will be made from dry wood wastes generated from the pine planing mill and the oak flooring plant, whereas wood chips will be made from green waste generated at the Camak complex, the Lumber City and the Riceboro operations, and 6,666 cords of green wastes from outsiders in order to keep the chipper in full operation.

B. Are these materials available locally in sufficient quantity?

1. Is the local materials market competitive?

The study does not specifically mention whether the local raw materials market is competitive, but it does go into detail on the availability of raw materials locally.

2. Is satisfactory delivery of local materials assured at reasonable prices?

The study does not specifically mention whether the local raw materials would be delivered satisfactorily and at reasonable prices; however, it does state that the family and business associates of the initiator of the complex can supply about 70% of the raw materials requirement at the Camak operation, and for the Lumber City and Riceboro operations, the initiator of the complex has entered into contracts for the supplying of raw materials.

C. What materials must be imported?

According to the study, no materials will be imported.
V. Manpower Requirements

A. What would be the total employment and job classification?

Total employment and job classification are stated on page 64.

B. Is a sufficient labor force available with the necessary skills?

There are 1,500 persons available for manufacturing employment. Although they are unskilled, they can be easily trained.

C. Are training facilities available?

This is not examined in the study.

VI. Capital Requirements

A. What are the most favorable plant size and total capital cost?

1. Fixed investment
   a. What would be the cost of land, land development, and building materials?
      Cost of land for 40 acres is $103,500, land development cost is $45,500, and building materials cost is $1,088,705.
   b. What equipment would be necessary, and what is the cost?
      This information is available in Table 26.

2. Working capital

   The working capital required for the proposed complex will range from $987,129 in the first year to $1,399,129 in the fourth year.

VII. Profit or Loss and Return on Investment

A. What is the total projected revenue that would be generated by the sale of products annually?

   This is given in Table 29.

B. What is the total amount of annual expenditures?

1. Fixed annual cost
   a. Manufacturing management, selling, administrative. For manufacturing expenditure, see Table 37; for selling expenditure, see Table 29; and for administrative expenditure, see Table 38.
b. Depreciation -- see Table 28

c. Interest on borrowed funds -- see Table 39

2. Variable annual cost
   a. Direct labor -- see Table 30
   b. Other manufacturing expense -- see Table 37

3. Cost of raw materials -- see Table 30

C. What is the projected annual profit or loss?

1. Return on investment -- not shown in the study, but it can be calculated

2. Payout

VIII. Capabilities of Management

A. What is the business experience of those who will actively manage the project?

1. Do they have successful backgrounds in a similar venture?
   a. Similar ventures
   b. Allied ventures
   c. Unrelated business
      
      They have successful backgrounds in similar and allied ventures.

2. Will outside interests distract from their attention to the project?

   This is not examined in the study.

3. Do they have other sources of income?

   Not specified in the study.

B. Is sufficiently skilled management available to handle

1. Selection of site, building, machinery, and equipment?

2. Operation of the plant?

3. Sales and merchandising?

4. Cost controls?
5. Accounting?
6. Employee relations?
They are not specified in the study.

IX. Other

A. What are the utility requirements and costs?
1. Power
2. Gas
3. Water

Not examined in the study.

B. Are needed support services available?
1. Subcontracting
2. Maintenance and repair service for equipment
3. Engineering
4. Advertising
5. Other

They are not examined in the study.

C. Is a satisfactory site available for the plant?
1. Are transportation facilities within easy access?
   a. Railway
   b. Highway
   c. Waterway

   According to the study, railway and highway facilities are available.

2. Are utilities on site?
   a. Water
   b. Electricity
   c. Gas
   d. Sewer

-33-
According to the study, they should be available because the site is adjacent to the industrial park proposed by the Forward Four Counties Development Company.

D. General environment conditions

1. Legislative atmosphere
   a. Attitude of legislative officials toward industry
   b. Laws affecting business and industry
   c. Zoning regulations
   d. Police and fire protection

2. Educational facilities
   a. School
   b. Library

3. Recreational facilities
   They are not examined in the study.

Evaluation by Mr. Boonkul Changsirivathanathamrong
Appendix 6
EVALUATION OF A FEASIBILITY STUDY ON MANUFACTURING
SOUTHERN PINE PLYWOOD IN OGLETHORPE COUNTY

I. Proposed Production

Sheathing-grade plywood

90 million square feet
per year (on a 3/8-inch
thickness basis)

II. Technology

1. Raw Material Supply. The proposed plant would require 37.5 million
board feet of pine sawtimber a year, which is available in a 60-mile radius of
Lexington, Georgia. Total sawtimber in this radius was recorded at 9,846 mil­
lion board feet, estimated annual growth at 1,018 million board feet, and an­
annual cut at 535.5 million board feet.

2. Cost of Production

<table>
<thead>
<tr>
<th></th>
<th>Average/M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of logs</td>
<td>$30.00</td>
</tr>
<tr>
<td>Cost of manufacturing</td>
<td>$26.00</td>
</tr>
<tr>
<td>Total cost of production</td>
<td>$56.00</td>
</tr>
</tbody>
</table>

3. Location. A proposed plant site, about 50 acres in size, is located
a few miles south of Crawford and Lexington, Georgia. Crawford and Lexington,
only three miles apart in the center of Oglethorpe County, are located in
northeast Georgia on the Piedmont Plateau.

4. Capacity. The proposed pine plywood plant would have an annual out­
put of 90 million square feet on a 3/8-inch thickness basis.

5. Machinery and Equipment. The total cost of machinery and equipment
which would be used in the pine plywood plant is $2,499,500. These items
would be supplied by the Coe Manufacturing Company.

Conclusion and Comment

Coe Manufacturing Company, whose machinery and equipment are specified
for the proposed plant, is an old and reputable firm which supplies roller
dryers and veneer machinery to various plywood factories throughout the United
States. It can be assumed that the plant's products will be of good quality.
However, I feel that the report should show a flow-chart of the processing
operations in the factory.
III. Market Potentials

1. Supply and Demand

(a) National Trends. In every five-year period between 1945 and 1960, some 20 to 40 new softwood plywood plants were added. By 1968, the South accounted for 16.1% of the total U. S. production and registered 33 plants out of a total of 174 plants. Total production in 1968 was 14,694 million square feet. The domestic demand for softwood plywood has been projected annually to 1978 by the American Plywood Association on the basis of major end uses. By 1978 the demand is projected to total 22.6 billion square feet, or about 8 billion square feet more than the volume produced in 1968.

(b) Regional Markets. Since southern pine plywood production began on a large commercial scale in 1964, the plywood market has expanded at a much more rapid rate in southern areas than in the nation as a whole. Between 1962 and 1968, sales in Atlanta increased 152%; Charlotte, 137%; Knoxville, 106%; Jacksonville, 120%; and Miami, 120%.

(c) European Market. Since plywood prices are generally higher in Europe than in the United States as a whole because of the limited supplies of plywood there, the proposed plant at Lexington would ship at least 50% of its production to Europe.

2. Selling Price

<table>
<thead>
<tr>
<th>Unsanded Plywood Type</th>
<th>List Price ($/M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; 5-ply CD</td>
<td>112</td>
</tr>
<tr>
<td>5/8&quot; 5-ply CD</td>
<td>89</td>
</tr>
<tr>
<td>1/2&quot; 5-ply CD</td>
<td>79</td>
</tr>
<tr>
<td>3/8&quot; 3-ply CD</td>
<td>54</td>
</tr>
</tbody>
</table>

Base price revenue, average/M = $57.07

Conclusion and Comment

I feel that the market outlook for southern pine plywood plants is bright because their proximity to major markets gives them distinct advantages in transportation costs, as well as customer services, over the western regions. Also, the main market destinations in Europe for this particular plant would
be Norway, Sweden, Denmark, and Germany, where the sponsoring firm already has trade contacts. But the study should provide some more details on the domestic market, such as who will be the distributors or the sales agents of the product, or whether the proposed company will sell directly to consumers, etc.

IV. Financing

1. Financing Requirements. The total capital requirements of the plant will be $5,075,500, including fixed assets of $4,201,500 and working capital of $874,000.

2. Sources of Financing. It is proposed that EDA supply 50% of the fixed investment; Hambros Bank, 24%; the Citizens and Southern National Bank, 15%; and Walter Nilsen, 11%. The working capital requirements would be satisfied by sales revenues or commercial loans.

3. Financial Statements. According to the final calculations presented in the report, the profit after taxes would be $1,018,400 or 24% of the fixed investment. Assuming interest payments on borrowed funds are $230,000 per year, net returns on the proposed production would be $698,400 or 16.6% of the fixed investment.

4. Foreign Exchange. This project will gain about $3.4 million a year in foreign exchange money as a result of selling 50% of its production to the European market.

Conclusion and Comment

This project seems to be on a firm financial footing, particularly if EDA supplies 50% of the fixed investment. The approximate profit also is very high.

V. Manpower

The planned project would employ a total of 174 persons, including 13 supervisory personnel and 161 direct laborers. Total annual payroll would be about $997,600.

Conclusion and Comment

The direct labor and supervision necessary for the plant are well classified in the report as to job titles, but the report should have discussed
supervisory personnel in more detail. For instance, how and where supervisors can be obtained should have been mentioned, because these positions need to be filled by people who are thoroughly experienced in the background of this specific product and there seems to be a lack of such persons.

Evaluation by Mrs. Premsri Katewongse
Appendix 7
EVALUATION OF A REPORT ON THE FEASIBILITY OF TURKEY MEAT PROCESSING IN KANSAS

I. Size of the Industry

The study concluded that further processing of turkey would be possible at any volume level in Kansas. Three production levels were defined as follows:

1. Large-volume plant - a plant operating at a processing volume of 40,000 to 60,000 pounds of raw product per eight-hour day.

2. Medium-volume plant - a plant operating at a processing volume of 10,000 to 20,000 pounds of raw product per eight-hour day.

3. Small-volume plant - a plant operating at a processing volume of 1,800 to 2,000 pounds of raw product per eight-hour day.

II. Technology

1. Plant Layout. The schematic layout designs for the medium and large-volume processing plants were developed strictly as a guide, using the following list of operations: receiving and thawing, raw-boning, assembly, cooking, packaging, freezing, casing, and shipping. It was assumed in the study that the small-volume further processing operation would be run (1) in conjunction with a regular turkey processing plant or (2) within a freezer warehouse.

2. Raw Materials. Turkey production in Kansas during the period 1956 through 1963, as reported by Crop Reporting Districts, averaged 871,500 birds annually. Out of this number, an estimated total of 309,502 tom turkeys were suitable for further processing in Kansas during 1963.

3. Machinery and Equipment. Equipment costs for the large-volume plant, the medium-volume plant, and the small-volume plant, including freezer mechanical costs, totaled $144,274, $51,264, and $11,083, respectively.

Conclusion and Comment

The study did not discuss specific plant locations, and the profitability of a venture cannot be determined with any degree of certainty without knowledge of the availability of raw materials and the size of the market in the vicinity of a specific plant site. Also, the source of the estimated machinery and equipment costs should have been given -- whether based on existing plants.
or on quotations by machinery suppliers. Last, it is important to know the amount of land required for the plant, which was not mentioned in the study.

III. Market

1. Supply and Demand. There are 43 firms engaged in further processing of turkeys within the seven-state area centering on Kansas. Kansas has only four such plants and none operating under federal inspection.

The market potential for further processed turkey in Kansas is tied to the existing channels of distribution. These channels can be classified as institutional or retail. Estimates of the volume of turkey, either ready-to-cook or further processed, consumed by the institutional and retail markets in Kansas are hard to make.

Turkey meat has certain advantages over other poultry and red meats in the marketplace. Turkey meat, particularly breast meat, is more nutritious, having more protein per pound than any other cooked meat. However, turkey meat has certain disadvantages which presently tend to limit its market potential. The general consumer attitude that turkey is a food for "special occasions" or for a large family gathering is apparent even in merchandising further processed turkey products. Present merchandising methods also tend to limit the market potential.

2. Type of Products. The further processed turkey products are such items as roasts, rolls, steaks, turkey parts, and similar products.

Conclusion and Comment

The study indicates that the demand for and supply of further processed turkey in Kansas are variable. Information on the demand in the potential market areas adjacent to the state of Kansas is lacking. It also would have been useful if a comparison of the selling price per unit of turkey products with the prices of other meats had been provided.

IV. Financing

1. The total equity capital required to finance a large-volume plant operating at a processing volume of 50,000 pounds of raw product per eight-hour day, 250 days a year, was estimated at $368,499.
2. The total equity capital required to finance a medium-volume plant operating at a processing volume of 15,000 pounds of raw product per eight-hour day, 250 days a year, was estimated at $112,913.

It is estimated that for both plants an investor could obtain a mortgage for 75% of the land, building, and equipment costs, and initially would need to provide only 25% equity.

3. **Rate of Return.** The rate of return on equity capital for the large-volume plant operating at 50,000 pounds of raw product per day was computed at 15%. If the plant operates at a level of 40,000 pounds, the rate of return is -43%.

The rate of return on equity capital for the medium-volume plant operating at 15,000 pounds of raw product per day was computed at 15%. If the production volume is reduced to 10,000 pounds, a negative rate of return of 102% is the result.

**Conclusion and Comment**

It is believed that the probability of success of the medium-volume plant is much greater than for the large-volume plant. However, since return on investment figures are not shown in this study, an accurate comparative evaluation cannot be made.

V. **Manpower**

1. Personnel requirements for managing and operating the large-volume plant total 100 persons, 25 men and 75 women. The estimated annual payroll for all employees is $389,740.

2. Personnel requirements for managing and operating the medium-volume plant total 41 persons, 10 men and 31 women. The estimated annual payroll for all employees is $157,560.

**Conclusion and Comment**

The study lists in detail the personnel requirements of these plants, in terms of number, sex, job description, weekly wage rate, and total yearly wages. However, the manpower resources available to meet these requirements are not discussed.

Evaluation by Mrs. Premtri Katewongse
Appendix 8
EVALUATION OF A REPORT ON A WOOD MANUFACTURING COMPLEX
AT CAMAK, GEORGIA

I. Proposed Production

A wood manufacturing complex is planned for integrated production of fin-
ished pine lumber, oak flooring, wood particleboard, prefab houses, and wood
chips.

II. Technology

1. Processing Lines. The Camak operation will comprise a sawmill, a dry
kiln, and a chipper, with supplementary sawn lumber supplied from two auxiliary
operations at Lumber City and Riceboro.

2. Raw Materials. The important raw material for the wood manufacturing
complex is logs, which would come from the family-owned timberlands of Mr.
Peter Knox and the timberlands owned by his business associates.

3. Cost of Production at Auxiliary Operations.

   (1) Finished lumber at the Lumber City operation:

<table>
<thead>
<tr>
<th></th>
<th>Pine</th>
<th>Oak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per MBF - Delivered</td>
<td>$77.80</td>
<td>$73.60</td>
</tr>
<tr>
<td>Camak</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   (2) At the Riceboro operation:

   |                      |       |      |
   | Cost per MBF - Delivered | $63.65 |
   | Camak                |       |      |

4. Location. The complex will be in Camak, which is located in Warren
County in the east central section of Georgia. It is about 110 miles east of
Atlanta and 45 miles north of Warrenton, the county seat of Warren County.

5. Capacity.

   Finished Pine Lumber       36.6 MMBF/year
   Oak Flooring               15.375 MMBF/year
   Particleboard              22 MM sq. ft./year, 3/4-in. basis
   Prefab Houses              1,000 units/year
   Wood Chips                 118,165 tons/year

6. Machinery. Machinery and equipment for the complex will cost
$4,229,885.
7. **Land and Layout.** The Camak wood manufacturing complex will be built on a 40-acre tract of land which already has been graded. Accesses have been cut to Georgia Highway 80 and the Georgia Railroad.

**Conclusions and Comments**

The study presents an excellent broad background on the complex and layout and raw materials, but it does not cover in detail the following points:

1. Sources of raw materials
   - logs
   - green wastes

2. Number of hours per day and days per year of operation

3. Sources of machinery

4. Per-unit cost of production of each product

**III. Market Potentials**

1. **Supply and Demand** for each product in the Camak wood manufacturing complex are discussed on three levels: national trend, regional market, and Knox marketing plan.

2. **Price.** The selling price of each product:

   (1) Finished Pine Lumber | MBF | $82
   (2) Oak Flooring         | MBF | $151
   (3) Wood Particleboard  | MSF | $130
   (4) Prefab Houses        | Each | $3,200

3. **Competition in the Market.** Since Mr. Knox has brought his experience, know-how, and affiliation with the timber, lumber, and prefab house industries to bear in the proposed plant study, competition should be no problem.

**Conclusions and Comments**

The marketing study of wood products to be made in the Camak wood manufacturing complex is relevant and generally provides sufficient details, but some projections of the future demand in the next five years or more would be helpful.
IV. Finance

1. Capital. The total capital requirements of the complex will be $6,486,719, including both fixed assets in two phases of $5,467,590 and working capital of $1,019,129.

2. Proposed Sources of Financing. Economic Development Administration, $3,250,000 or 50% of total investment (59% of fixed investment); CSRA Capital Corporation, $500,000 or 8%; Johnson, Chalmers, and Moore, $320,000 or 5%; Siempelkamp & Co., $275,000 or 12%; and stockholder equity of Knox Wood Products, Inc., $1,391,719 or 21%.

3. Profits and Returns. In the fourth year, all five products planned for the complex, plus the wood waste value developed, would be in full production. The annual net profit would be equivalent to 13.9% of the fixed investment and 11.7% of the total investment.

Conclusions and Comments

As is shown in a summary statement of estimated costs and returns, the annual profit is high enough to warrant the assumption that this business will be successful in the future.

V. Manpower

Labor requirements for the different operations are summarized in terms of number of persons, hourly wage rate, and weekly rate. Employment for the entire complex would total 424 persons.

Conclusions and Comments

The manpower section should mention the sources of manpower, especially skilled labors, technicians, and administrative personnel.

Evaluation by Mrs. Premsri Katewongse
MEMORANDUM

To: Nelson C. Wall
From: Ben James
Subject: Plant Trips for Thai Students

The following list indicates plant trips planned or taken by Mrs. Premsri and Mr. Boonkul.

<table>
<thead>
<tr>
<th>Date</th>
<th>Plant Name</th>
<th>Location</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/27</td>
<td>Fulton Cotton Mill</td>
<td>Atlanta</td>
<td>Cotton cloth</td>
</tr>
<tr>
<td>10/1</td>
<td>Atlanta Industrial Districts</td>
<td>Atlanta</td>
<td>Synthetic Yarn</td>
</tr>
<tr>
<td>10/7</td>
<td>Integrated Products</td>
<td>Rome</td>
<td>Tufted carpet</td>
</tr>
<tr>
<td>10/7</td>
<td>Trend Mills</td>
<td>Rome</td>
<td>Clothing</td>
</tr>
<tr>
<td>10/13</td>
<td>Macon Shirt Company</td>
<td>Macon</td>
<td>Percale Sheets</td>
</tr>
<tr>
<td>10/19</td>
<td>General Electric Co.</td>
<td>Atlanta</td>
<td>Switchseal</td>
</tr>
<tr>
<td>10/22</td>
<td>General Electric Co.</td>
<td>Rome</td>
<td>Transformers</td>
</tr>
<tr>
<td>10/22</td>
<td>D &amp; J Manufacturing Co.</td>
<td>Rome</td>
<td>Aluminum Castings</td>
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<tr>
<td>10/27</td>
<td>Southwire Co.</td>
<td>Carrollton</td>
<td>Copper wire</td>
</tr>
<tr>
<td>11/4</td>
<td>Ford Motor Co.</td>
<td>Atlanta</td>
<td>Automobiles</td>
</tr>
<tr>
<td>11/11</td>
<td>Sweetheart Plastics Co.</td>
<td>Conyers</td>
<td>Plastic containers</td>
</tr>
<tr>
<td>11/11</td>
<td>Wallace Hatchery</td>
<td>Douglas</td>
<td>Broiler processing</td>
</tr>
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<td>11/12</td>
<td>Poultry Health Service</td>
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<td>Baby chicks</td>
</tr>
<tr>
<td>11/16</td>
<td>Union Camp Corporation</td>
<td>Savannah</td>
<td>Chicken Canning</td>
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<td>Southern States Fertilizer</td>
<td>Savannah</td>
<td>Chemical fertilizer</td>
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<td>11/23</td>
<td>International Chem &amp; Minerals</td>
<td>Augusta</td>
<td>Chemicals</td>
</tr>
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<td>11/23</td>
<td>Altair Homes</td>
<td>Americus</td>
<td>Mobile homes</td>
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<tr>
<td>11/24</td>
<td>Lilliston Corp.</td>
<td>Albany</td>
<td>Farm equipment</td>
</tr>
<tr>
<td>12/3</td>
<td>Firestone Corp.</td>
<td>Albany</td>
<td>Tires</td>
</tr>
<tr>
<td>12/10</td>
<td>Universal Rundle</td>
<td>Monroe</td>
<td>Sanitary ware</td>
</tr>
</tbody>
</table>
A STUDY OF THE FEASIBILITY OF A WOOD MANUFACTURING COMPLEX
AT CANAK, GEORGIA

by

Tze I. Chiang
Senior Research Economist

Industrial Development Division
Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY
December 1967
Appendix 11

FEASIBILITY OF TURKEY MEAT PROCESSING
IN KANSAS

A reprint of a report to
MARKETING DIVISION
KANSAS STATE BOARD OF AGRICULTURE

by

AGRi RESEARCH, INC.
200 Research Drive, Manhattan, Kansas

This report was developed with funds provided by the marketing activities of the Kansas State Board of Agriculture and the Agricultural Marketing Service, United States Department of Agriculture, under provisions of the Agricultural Marketing Act of 1946.

The purpose of this study was to determine the feasibility of further processing of turkey meat in Kansas as a stimulus to the state's turkey industry and as a benefit to the overall Kansas economy.

Copies of this report can be obtained by writing to the Division of Extension, Umberger Hall, Kansas State University, Manhattan, Kansas.
Appendix 12

A. Feasibility Study:
Manufacturing Southern Pine Plywood
Oglethorpe County, Georgia

By D. A. S. Ong
INDUSTRIAL DEVELOPMENT DIVISION

Project A 2011

CUTTING INSTITUTE OF TECHNOLOGY