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REPORT

UNIDO PROJECT DP/VIE/87/016 - ADDITIONAL TRAINING

TRAINING ON PROJECT MANAGEMENT/EXECUTION FOR "CECO"

Training Period and Place:

25 Mar. - 06 Apr. 1996 in CECO Hanoi office

Training Textbook :

Please refer to Attachment - 1

Training Attendance :

Please refer to Attachment - 2

1. Typical Project Procedures had been prepared and used as a part of the text book. Those procedures were discussed one by one with CECO trainees during the additional training program.

They were interested in the philosophy and the background of those procedures which were established based on our past experiences. However, they had difficulties in their complete understanding since the project size of their past experiences and current projects are much smaller than that of our experiences.

We have discussed why such procedures are required for the project management/execution and advised how to edit such procedures and establish their own procedures. They have started drafting some of procedures for their own use with our assistance.

2. Typical Project Master Schedule (PMS) prepared for the training purpose was discussed in details, particularly on the following points:

- Development of a PMS
- Project control and execution based on the PMS

Regarding the software for developing a PMS, we recommended the "EXCEL" or "LOTUS 123" both of which had been installed in their computers. For an exercise they have developed a PMS for one of their running projects by use of the "EXCEL" by themselves.

3. We believe that the training program of "Basic Computer Usage" was very effective and practical for the quick improvement of CECO's capabilities because they have difficulties in familiarizing with computers due to insufficient manuals and the language problem.

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It was observed that their capabilities to use computers have been improved day by day and that they have prepared a procedure and PMS by themselves at later stage of the training program.

4. At the final stage of the training program CECO requested us to make comments and suggestions on their organisation chart draft.

After lengthy discussions, a revised organisation chart was concluded for their further review and issue. The original and the revised organisation chart draft were attached for reference. (Attachment-3 & 4)

Attachment - 1

TRAINING TEXTBOOK FOR CECO

(UNIDO PROJECT DP/VIE/87/016-ADDITIONAL TRAINING)

CONTENTS

1. PROJECT PROCEDURES

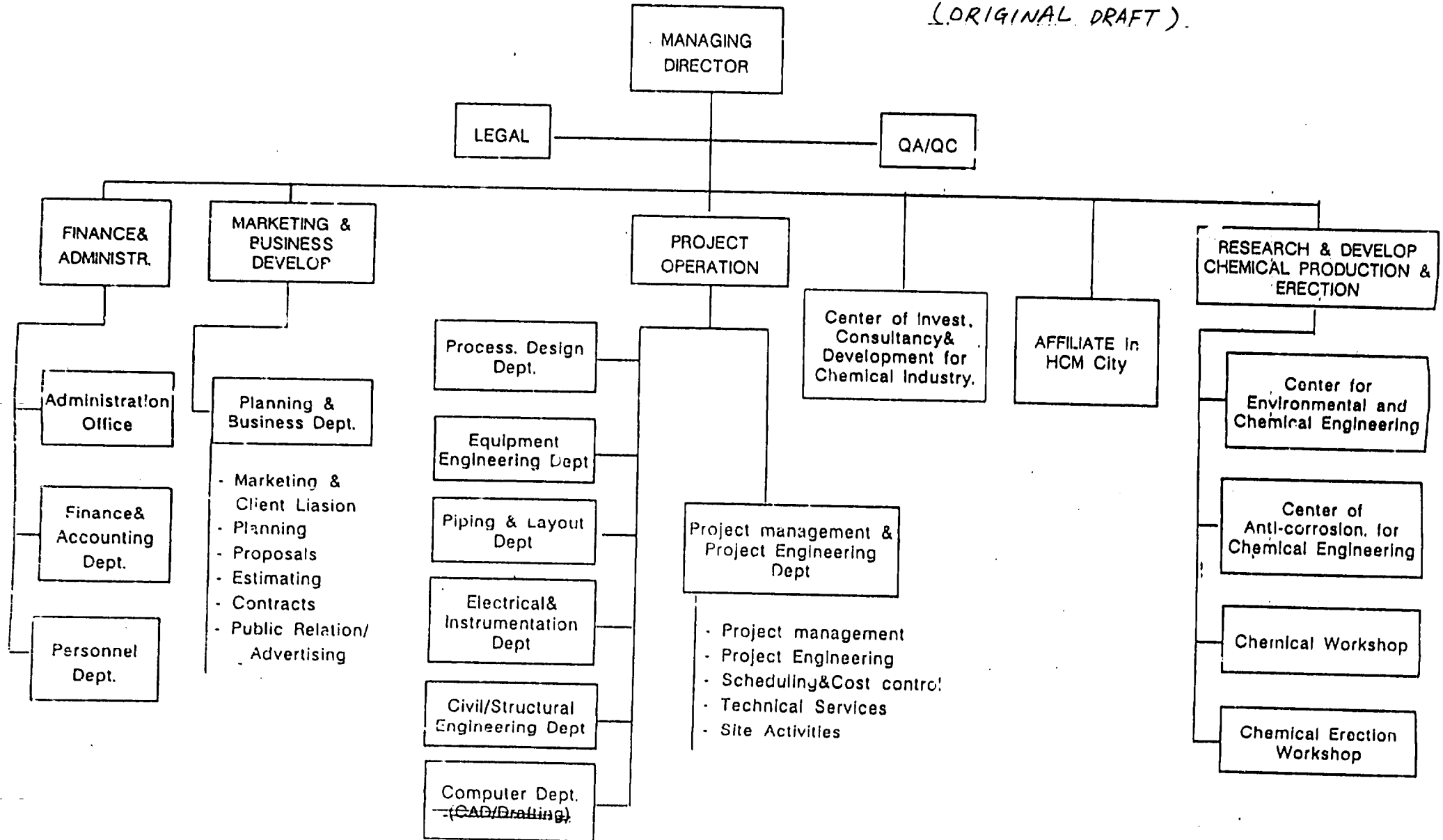
- S-1130-001 Project Control Procedure
- S-1130-003 Title Block Requirements for Drawings, Specifications, Requisitions and Data Sheets
- S-1140-010 Project Coordination Procedure
- S-1140-011 Project Numbering System
- S-1140-013 Documents Control Procedure
- S-1140-014 Design Change Handling Procedure

2. PROJECT MASTER SCHEDULE

Example of Project Master Schedule

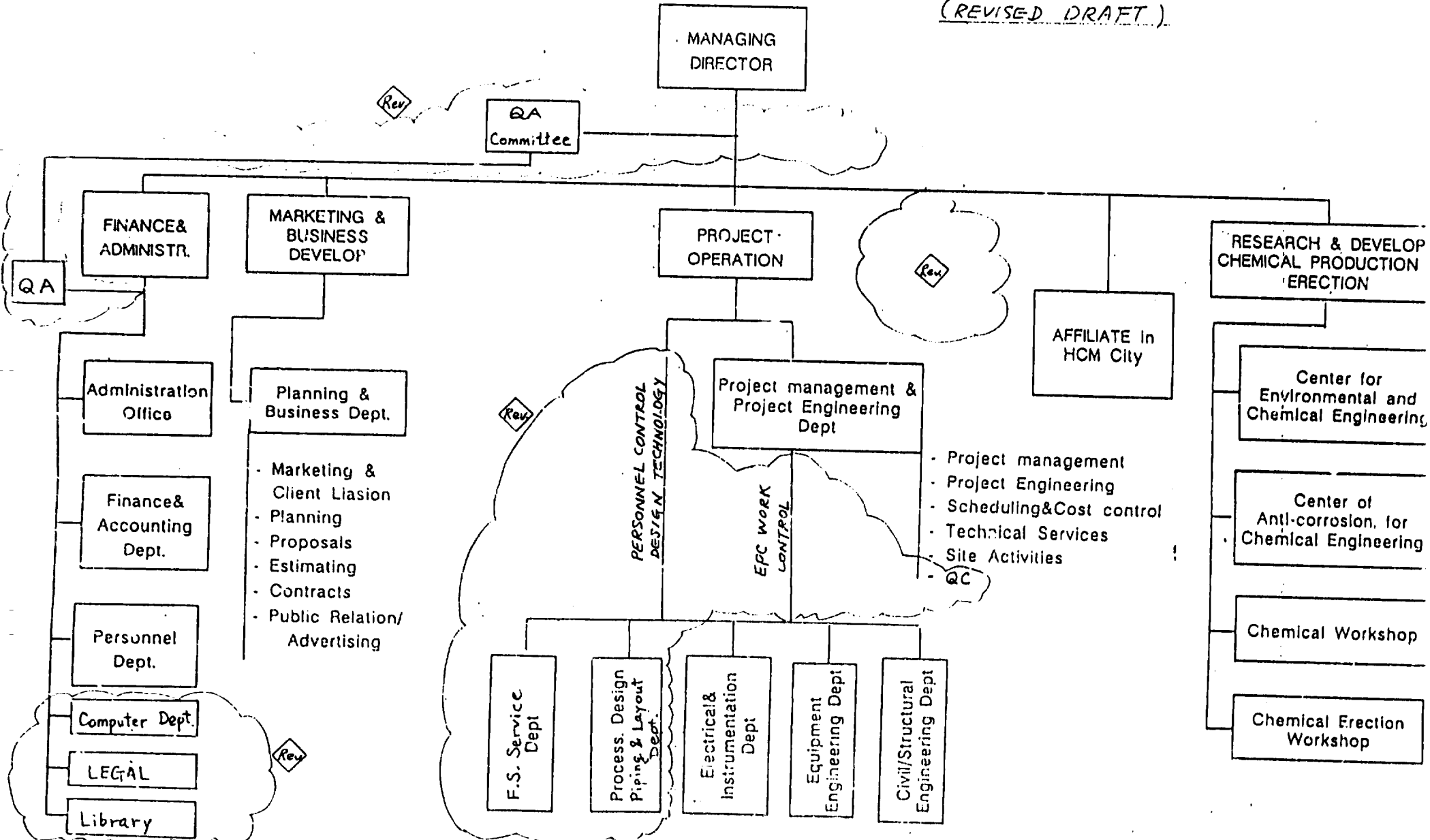
ORGANIZATION CHART OF CECO

(ORIGINAL DRAFT)



ORGANIZATION CHART OF CECO

(REVISED DRAFT.)



**REPORT OF CONSULTANCY AND TRAINING SERVICES
FOR
CHEMICAL ENGINEERING CORPORATION (CECO)/VIETNAM**

1. PREFACE

JGC Corporation provided consultancy and training services for CECO at their Hanoi Office.

This report summarizes the "Construction" course given from April 1 through April 6, 1996. The lecture for the course was given by Mr. Tanimoto of Construction Department, International Project Division in JGC Corporation.

2. "CONSTRUCTION" COURSE PROGRAM

The course program is attached as Attachment-1.

The program contents are categorized into the following four subjects.

2.1 Construction Management

The objectives of the construction stage and routine work at the site were explained. During this lecture, the importance of safety was emphasized and the functions and responsibilities of each section of the field organization were explained.

2.2 Construction Planning and Reporting

Construction planning method, to include procedure for direct man-hour calculation and planned progress curve preparation, was explained. The procedures were explained and demonstrated on the computer using the respective work sheets.

The method of analysis, especially for work performance of laborers and status of the schedule, and the reporting format were explained and also demonstrated on the computer using the respective work sheets.

To confirm understanding of the attendants, exercises for planning and analysis were carried out.

2.3 Contract Variation

The types of construction contracts, i.e., lump sum, remeasure and reimbursable contracts, were introduced. The advantages and disadvantages and the condition for application of each contract were explained.

Explanation of remeasure contract was expanded to include explanation of the work flow for subcontracting.

2.4 Safety Procedure

JGC's standard safety procedure was explained. The function of the safety committee at the site and the safety work flow from induction to inspection/analysis were highlighted and explained in detail.

An electronic data file of JGC's safety procedure was given to CECO.

3. ATTENDANCE

The attendance sheet is attached.

ATTENDANCE LIST

LESSON: WHAT IS CONSTN MGT

FILE NAME: ATDCLISTW3

NO	DATE	NAME	POSITION	SIGN
1	4/1/96	Trần Thị Hải	Kỹ Sư CNTT	[Signature]
2		Nguyễn Minh Nguyệt	Kỹ Sư CKCT	[Signature]
3		Đỗ Công Hùng	"	[Signature]
4		Bùi Ngọc Quang	Instrument Eng	[Signature]
5		Ngô Thị Thanh	Engineer	[Signature]
6		Ngô Thị Phương	-H-	[Signature]
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LESSON: CONSTN PLANNING

FILE NAME : ATDCLIST WK3

NO.	DATE	NAME	POSITION	SIGN
1	4/2/96	Bùi Ngọc Quỳnh	Engineer	<i>[Signature]</i>
2		Mai Thị Phương	"	<i>[Signature]</i>
3		Võ Thị Thanh	"	<i>[Signature]</i>
4		Đặng Tấn Hòa	"	<i>[Signature]</i>
5		Ngô Minh Nguyệt	"	<i>[Signature]</i>
6		Lê Công Hoàng	"	<i>[Signature]</i>
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2		Le Cong Hung		<i>[Signature]</i>
3		Ng ² Minh Quang		<i>[Signature]</i>
4		Vo Thi Thanh		
5		Trang Thi Thi		H/DZ
6		Mai Thi Phuong		
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ATTENDANCE LIST

LESSON: SUBCONTRAC

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1	4/21/96	Bui Nga Quyen		<i>[Signature]</i>
2		Lo Cong Thuan		<i>[Signature]</i>
3		Ng Minh Nguyn		<i>[Signature]</i>
4		Lam Thi Bich		<i>[Signature]</i>
5		Phan Thi Hoi		<i>[Signature]</i>
6		Vo Thi Thanh		<i>[Signature]</i>
7		Mai Thi Phuong		<i>[Signature]</i>
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ATTENDANCE LIST

LESSON: SUB CONTRACT

FILE NAME: ATDCLIST.WK3

NO	DATE	NAME	POSITION	SIGN
1	9/05/96			
2		Sou Ngô Quang		<i>[Signature]</i>
3		Ngô Minh Nguyệt		<i>[Signature]</i>
4		Lê Thị Hải		<i>[Signature]</i>
5		Lâm Thị Bích		<i>[Signature]</i>
6		Vũ Thị Thanh		<i>[Signature]</i>
7		Mai Thị Phương		<i>[Signature]</i>
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15 April 1996
Reporter: H.Osaga
Project Management Technology Team

TRAINING ON BASIC COMPUTER USAGE FOR "CECO"

1. GENERAL

To improve the project management, planning, and execution, the utilization of the computer is essential. It will contribute to the Client satisfaction, the realization of work execution, more efficient work flow for all over the company activity. This computer is the first trial so that the introductory course for beginners are prepared by JGC.

2. DURATION OF TRAINING

From 17th March 1996 to 31st March, it was carried out at their Hanoi office to CECO Engineers (approx. 8 engineers).

3. CONTENTS OF TRAINING

The following items were done for the training. The main purpose is not only limited to the computer itself, but also covered with the introduction of JGC's typical documents and blankforms.

- (1) The basic usage of MS-EXCEL (Spreadsheet)
- (2) The basic usage of MS-Word (Word Processing)
- (3) Mini Work-Shop for Schedule control and planning used by Computer
- (4) The lecture & introduction of JGC-PMS (Project Management System)
- (5) The lecture & introduction of JGC-CMS (Construction Management System)
- (6) The practice of "DOCUMENT LIST" by MS-EXCEL
- (7) The practice of "DOCUMENT STATUS REPORT" by MS-EXCEL
- (8) The exercise of building Database by MS-EXCEL
- (9) The practice of "TRANSMITTAL" by MS-WORD
- (10) The practice of "SPECIFICATION" by MS-WORD
- (11) The basic usage of MS-POWERPOINT (Presentation)

4. COMMENTS

On 29th March the summary meeting was held for general discussion for computer (network) configuration, the function of system section at CECO in near future. About 10 new computers are planned to be introduced to the existing 15 computers. They were afraid that the most effective way to use them, so that the arrangement of computer, including the software fitted to each section, and the integrated network were suggested by JGC.

Only some limited members can handle computers. The rest seems to hesitate to touch them. The bottom-up training to allow all engineers to handle computers and the systemization for all over the company function, described as below, are urgently required.

- (1) Introduction of Overall Company database, with computer network
- (2) Establishment of electrical Cost database, especially Unit price data
- (3) Establishment of Man-hour Control System
- (4) Establishment of Document Control System, and introduction of productivity concept integrating by Man-Hour System
- (5) Establishment of Material Control System, and development to the Purchasing and Delivery (Expediting) Control System
- (6) Integration of Salary System and Man-Hour System
- (7) Introduction of CAD System, and utilization of CAD data
- (8) Establishment of Material Take-Off System
- (9) Collaboration of Process calculation program to the execution work flow
- (10) Systemization of Master Scheduling concept
- (11) Establishment of Vendor database

**REPORT on CONSULTING and TRAINING SERVICES
for CHEMICAL ENGINEERING CORPORATION(CECO, VIETNAM)**

(QUALITY ASSURANCE)

JGC CORPORATION
QUALITY ASSURANCE DEPT.
TAKAO KUSAKABE(16 APR. '96)

1. PREFACE

JGC Corporation executed consulting and training services at CECO in Hanoi city to improve it's capabilities in engineering and construction services.

This report is to summarize the details of "QUALITY ASSURANCE" training course held from April 1st to 6th 1996.

2. TERMS AND CONDITIONS

The training was held at the CECO Hanoi office in the form of lecture from 8:30 AM to 4:00 PM every day for 6days.

The Lecturer was:

Takao Kusakabe, a registered consulting engineer,
a senior engineer of Quality Assurance Department,
Operations Administration & Services Division,
JGC CORPORATION

Attendants were:

Project	Engineer	1
QA	Engineer	1
Equipment	Engineer	1
Personel	Engineer	1
Consultancy	Engineer	2

total 6

The lecture was given in English, but simultaneously interpreted into Vietnamese by an attendant.

Therefore, there was no communication problem between the lecturer and attendants.

3. CONTENTS OF LECTURE

Lecture was given for the following items:

1. Introduction of Quality Assurance
2. Introduction of ISO 9000 series
3. Introduction of JGC Quality Manual
4. Introduction of Quality System Procedure
5. Introduction of Quality System Audit
6. Discussion about QA Department in CECO's organization

4. DETAILS OF LECTURE

A textbook and OHP films were used.

4.1. Introduction of Quality Assurance

The basics of Quality Assurance covering the following items were presented.

- a. Necessity of Quality Assurance
- b. Quality System certification based on ISO 9000s
- c. World trend of ISO 9000s certificate acquisition
- d. Advantages of certificate acquisition

4.2. Introduction of ISO 9000 series

The features of ISO 9000 series covering the following items were presented.

- a. ISO 9001
Major points of ISO 9001
- b. ISO 9000 series
Mutual relations between ISO 9000 series

4.3. Introduction of JGC Quality Manual

The contents of JGC Quality Manual were explained in comparison with ISO 9001.

4.4. Introduction of Quality System Procedure

The concepts of Quality System Procedure covering the following items were presented.

- a. Hierarchical procedures
- b. Relationship between ISO 9001, Quality Manual and procedures per level
- c. Persons and departments in charge of preparing procedures
- d. Introduction of JGC procedures
- e. Exercise of writing CECO's departmental procedures

Attendants complained of a difficulty in preparing procedures because of lack of experience.

4.5. Introduction of Quality System Audit

An informal Quality System Audit was applied by the lecturer to Equipment Design Department.

Findings were:

- a. No signature and no date on scope of work
- b. No revision No. on design drawings
- c. No marking on a revised design drawing
- d. No control of standards

4.6. Discussion about QA department in CECO's organization

QA/QC department of CECO was established just three months ago.

On April 5, JGC trainers, Mr. Iwasaki and Mr. Kusakabe, were requested to discuss CECO's QA Department with CECO's director and vice director, Dr. Phi. JGC trainers recommended that QA be separated from QC and that QA Department be located in Finance & Administration division. The managements of CECO agreed with this JGC's recommendation.

REPORT

UNIDO PROJECT DP/VIE/87/016 AMENDMENT

TRAINING ON PROCUREMENT FOR "CECO"

Training Period and Place:

25 March - 29 March, 1996 in CECO Hanoi Office

Training Attendance :

Please see attachment - 1

Trainer :

Mr. H. Nakagome, JGC Corporation

Training Textbook :

Please see attachment - 2

1. A discussion has been held to begin this training program with Mr. Dao Kim Ngoc, Manager of Project Management.
The following were discussed and confirmed.

- 1) The training schedule was confirmed and agreed.
- 2) CECO is planning to implement reorganization very near future.
The new organization will most likely have the Procurement Department as new department.
JGC trainer suggested that the newly developed Procurement Department should be under direct control of Managing Director.

After the discussion Mr. Ngoc showed around their office and introduced to the persons of CECO related to this training program.

2. The training program was implemented as follows.

- 1) Getting acquainted with 'Core position of procurement' in project activities referring to JGC project execution organization(SESSION 1): Mar 25-Mar 26
- 2) Getting more detailed knowledge of major activities of each procurement stage, General Management, Purchasing, Expediting, Shop Inspection and Traffic(SESSION 2):Mar 26-Mar 27
- 3) Introduction of tools of procurement activities to help CECO establish an ideal monitoring system for equipment and material scheduling, expediting, inspection and traffic (SESSION 3): Mar 27-Mar 28
- 4) Trial operation of personal computer (SESSION 4): Mar 28-Mar 29

3. The following are JGC trainer's impression obtained during the training period as to CECO's procurement activity of today and future.

- 1) CECO has many experiences of design and construction of chemical industries but few experience with material procurement.
Even in the past project where procurement was required, procurement control does not seem to have been managed, since they have not had procurement organization till today.
- 2) Now many personal computers are available to use in CECO and computer engineers have been getting more practical knowledge on it day by day.
Procurement organization could rather easily take off if such new knowledge of computer system can be reflected properly while developing the scheme for procurement procedure..
- 3) The trainees who attended to procurement course showed much interest in operating personal computer and seriously listened to JGC trainer's lecture.
JGC trainer would suggest that CECO should first establish procurement procedure based on 2 procurement training programs rendered in Dec'95 and Mar'96 by JGC trainer utilizing personal computer.
- 4) After fully getting acquainted with the personal computer as well as the procurement activity, further advanced computer program could be developed by themselves.

ATTACHMENT - 1

Procurement Course ! From 25. Mar. 1996
To 29. Mar. 1996

Attended :

- 1 - BUI NGO QUANG
- 2 - LE MANH HUNG
- 3 - NGUYEN MINH NGUYET[^]
- 4 - LAM THI BICH

Department
Electrical + Instrument
Layout Engineering
Equipment
Plan + Business

Mar. 29. 1996

CLASSROOM TRAINING PROGRAM
FOR
CHEMICAL ENGINEERING CORPORATION
ON
PROCUREMENT WORK

CONTENTS

SESSION 1. Core Position in Project Activities

- Position of Procurement
- Procurement Policy & Objectives
- Procurement Organization
- Objective of Procurement Service

SESSION 2. Outline of Procurement Activities

- Project Procurement Management
- Purchasing
- Expediting
- Shop Inspection
- Traffic

SESSION 3. Tools of Procurement Activities

- Procedures
- Standardized Documents
- Integrated Vendor Information System
- Procurement Control System
- In-House Cost Data

SESSION 4. Execution of Procurement Work

1. Purchasing

- Vendor List
- Purchasing Schedule Planning
- Inquiry Release
- Obtaining Vendor Quotation
- Bid Evaluation
- Order Authorization
- Letter of Intent
- Purchase Order
- Budget Control
- Payment Forecast

2. Expediting

- Open Order Status List
- Expediting Control Level
- Monitoring Material Status
- Coordinate Expediting Activity

3.. Shop Inspection

- Establish Quality Control Procedure
- Selection of Inspection Agency
- Review Vendor's QC Plan
- Request for Inspection
- Preinspection Meeting
- Establish Overall Inspection Schedule
- Review Material Certificate
- Witness Test and Inspection
- Release Inspection Certificate

4. **Shipping**

- **Establish Overall Shipping Plan**
- **Report Monthly Shipping Certificate**
- **Release Shipping Certificate**
- **Coordinate Export and Import Work**
- **Issue Material Status Report**