

法規名稱：(終)IMPLEMENTING ARRANGEMENT #3 TO THE AGREEMENT BETWEEN THE COORDINATION COUNCIL FOR NORTH AMERICAN AFFAIRS AND THE AMERICAN INSTITUTE IN TAIWAN FOR TECHNICAL COOPERATION IN SEISMOLOGY AND EARTHQUAKE MONITORING SYSTEMS DEVELOPMENT FOR A PROJECT IMPLEMENTATION PLAN FOR THE JOINT EARTHQUAKE MONITORING SYSTEM PROJECT (AD.1994.08.29)

終止日期：民國 84 年 06 月 30 日

ARTICLE I-SCOPE

This Implementing Arrangement describes the cooperative scientific and technical activities to be undertaken by the American Institute in Taiwan (AIT) and its designated representative, the Office of Earthquakes, Volcanos, and Engineering(OEVE)of the U.S . Geological Survey (USGS), to develop an Implementation Plan for the Joint Earthquake Monitoring System Project and to develop an Advanced Earthquake Monitoring System for use by the Central Weather Bureau (CWB),the designated representative of the Coordination Council for North American Affairs (CCNAA),to improve earthquake monitoring and early warning capabilities in Taiwan area.

ARTICLE II-AUTHORIZATION

The activities described in this Implementing Arrangement will be carried out under the general terms and conditions established by the Agreement between AIT and CCNAA for Technical Cooperation in Seismology and Earthquake Monitoring Systems Development. This Implementing Arrangement is hereby attached to that Agreement and becomes part of the Agreement.

ARTICLE III-SERVICES

AIT and its designated representative, USGS/OEVE, will consult with CCNAA and its designated representative, CWB, on the requirements for, and feasibility of, conducting a Joint Earthquake Monitoring System Project and will prepare a report in the form of a Project Implementation Plan that will be submitted to CCNAA

The Project Implementation Plan will contain information that may be utilized by the CWB to seek additional approval for the p-

procurement and installation of an Advanced Earthquake Monitoring System. To develop the Plan, USGS/OEVE and AIT, in consultation with CCNAA and representatives of the CWB, will:

- A. Identify key seismological factors which will evaluate the operation of an Advanced Earthquake Monitoring System.
- B. Define the acceptable level of operation performance for an Advanced Earthquake Monitoring System.
- C. Evaluate the operation procedure of a prototype Advanced Earthquake Monitoring System by hardware and software simulation.
- D. Provide an estimated system performance evaluation schedule.
- E. Provide cost estimates for the procurement, installation and operation of an Advanced Earthquake Monitoring System.
- F. Technical training for CWB staff members will be conducted by the staff of USGS/OEVE on the basic elements and operation of an Advanced Earthquake Monitoring System.

ARTICLE IV-RESPONSIBILITIES OF AIT AND USGS/OEVE

AIT and USGS/OEVE will:

- A. Provide overall management of the Feasibility Study and the preparation of the Project Implementation Plan that will be delivered to CCNAA at the conclusion of the study period.
- B. Consult, as necessary and appropriate, with representatives of CWB and agencies designated by CCNAA.
- C. Assign appropriate staff to perform the services defined in this Implementing Arrangement and provide all necessary support in accordance with the terms of the Agreement.

ARTICLE V-RESPONSIBILITIES OF CCNAA

The CCNAA will:

- A. Provide guidance to USGS/OEVE and AIT on consultations with representative of the CWB and other agencies, and facilitate such contacts.
- B. Ensure appropriate transfer of funds to AIT for reimbursable activities as mutually agreed.
- C. Accept delivery of the Project Implementation Plan and make distribution as appropriate.

ARTICLE VI-FINANCIAL ARRANGEMENTS



In accordance with the Agreement, CCNAA will reimburse AIT for all costs incurred by USGSIOEVE in association with this Implementing Arrangement. The total cost for activities described in this Implementing Arrangement is mutually agreed not to exceed US\$154,000. It is also agreed that fifty percent of the funds will be transferred in advance of the beginning of the project and that the remaining fifty percent of the funds will be transferred from CCNAA to AIT no later than thirty days after the completion of the project.

ARTICLE VII-INTELLECTUAL PROPERTY CONSIDERATIONS

No intellectual property considerations are expected to arise in conjunction with activities described in this Implementing Arrangement. The Project Implementation Plan will not be distributed to other parties until it has been approved in final form by CCNAA, CWB, AIT, and USGS.

ARTICLE VIII-EFFECTIVE DATE, AMENDMENT AND TERMINATION

This Implementing Arrangement is effective on the date of the last signature hereafter. This Implementing Arrangement may be amended and/or terminated in accordance with the terms of the Agreement. The estimated completion date for activities described in this Implementing Arrangement is June 30, 1995.

FOR THE COORDINATION COUNCIL

FOR NORTH AMERICAN AFFAIRS

[Signed]

James Wen-Chung Chang

Deputy Representative

August 29, 1994

FOR THE AMERICAN INSTITUTE

IN TAIWAN

[Signed]

J. Richard Rock

DEPUTY MANAGING DIRECTOR

July 28, 1994

STATEMENT OF WORK-FOR IMPLEMENTING ARRANGEMENT #3

A Project Implementation Plan for The Joint Earthquake Monitoring System Project

1.0 BACKGROUND AND OBJECTIVES

The Agreement between the American Institute in Taiwan (AIT) and the Coordination Council for North American Affairs (CCNAA) pro-

vides for technical cooperation between the U.S. Geological Survey's Office of Earthquakes, Volcanos, and Engineering (USGS/OEVE) and the Central Weather Bureau (CWB) in seismology and earthquake monitoring systems development. OEVE is providing technical advice to the CWB to improve CWB earthquake monitoring capabilities, particularly with respect to early warning of a large earthquake that has occurred.

The Advanced Earthquake Monitoring System that the CWB intends to implement is comprised of three primary subsystems: (1) clusters of telemetered seismic stations, (2) intelligent nodes, and (3) a central facility. The Advanced Earthquake Monitoring System also includes the necessary communications between these subsystems, and interfaces with the CWB Seismic Network and with distribution circuits that disseminate information to various users.

2.0 TASK DESCRIPTIONS

Implementing Arrangement #3, Article III-Services, describes the following technical areas of activities to be conducted by the USGS in consultation with AIT and representatives of the CWB:

- A. Identify key seismological factors which will evaluate the operation of an Advanced Earthquake Monitoring System.
- B. Define the acceptable level of operation performance for an Advanced Earth quake Monitoring System.
- C. Evaluate the operation procedure of a prototype Advanced Earthquake Monitoring System by hardware and software simulation.
- D. Provide an estimated system performance evaluation schedule.
- E. Provide cost estimates for the procurement, installation and operation of an Advanced Earthquake Monitoring System.
- F. Technical training for CWB staff members will be conducted by the staff of USGS/OEVE on the basic elements and operation of an Advanced Earthquake Monitoring System.

Task 1. Project Implementation Plan

Performance Period: July 1, 1994 through June 30, 1995.

Resources Required: man-months

3.0 OEVE Staff

1.0 CWB Joint Team (while in Menlo Park)

Deliverables: The OEVE staff (in consultation with the CWB Joint Team) will prepare a Project Implementation Plan for an Advanced Earthquake Monitoring System.

Task 2. Technical Training

Performance Period: July 1, 1994 through June 30, 1995.

Resources Required: man-months

2.0 OEVE Staff

Deliverables: AT the request of CWB, the OEVE Staff will conduct training class(es), either in Menlo Park, CA, and/or in Taipei for CWB staff members on basic elements of an Advanced Earthquake Monitoring System, including operation and evaluation procedures. Duration of the class will be approximately one week. Detailed class notes will be prepared, including materials written in Chinese.

3.0 SCHEDULE

Work will be performed between July 1, 1994 and June 30, 1995 at the OEVE facility in Menlo Park, California, and at the CWB facilities in Taiwan area. If necessary, OEVE personnel will visit the CWB facilities in Taiwan area, for consultations, training, and field work. As part of the ongoing activities, preparation of Implementing Arrangement #4 for the project activities for the period of July 1, 1995 to June 30, 1996 should be completed by June 1, 1995.

Functions	Completion Date
Task 1. Project Evaluation Plan	6/30/95
Task 2. Technical Training	6/30/95

4.0 BUDGET

As stated in Implementing Arrangement #3, funds available for the tasks described in this Statement of Work will not exceed US\$ 154,000.

All budget figures are estimates. Actual amounts will be accrued for purposes of fulfilling the financial arrangements described



in the Implementing Arrangement #3, in accordance with the terms of the Agreement.

All programs within the Office of Earthquakes, Volcanos, and Engineering use the same budget procedure, whether they are base-funded programs or externally-funded programs.

In FY 94, a fixed rate overhead charge is applied to all program funds to cover management, administrative and indirect costs, and the use of the OEVE facility and all of the equipment and data associated with it. This fee is 40% of the project budget.

Travel of OEVE personnel to Taiwan area will be normally at the invitation of CWB. CWB or its designated representative will provide prepaid round-trip air ticket(s) to AIT for forwarding to USGS traveler and per diem (at the standard CWB rate in the form of a bank check or local currency payable to AIT for disbursement to USGS traveler) . Both ticket(s) and per diem will be sent to AIT to be forwarded to the USGS or the invited OEVE personnel .

Travel of OEVE personnel to Taiwan area may also be initiated by the USGS if necessary. In this case, the USGS will be responsible for the travel expenses.

Charges for teaching materials and support, hardware and software for simulating an Advanced Earthquake Monitoring System, and report preparation, etc. will be at actual cost.

Budget estimates:

OEVE Staff Cost (6 man-months)	\$ 50,000
Hardware and software for simulation	40,000
Teaching materials and support	10,000
Report preparation and miscellaneous	10,000
	<hr/>
Sub-total:	\$110,000
USGS Overhead	44,000
	<hr/>
Total:	\$154,000