

法規名稱：IMPLEMENTING ARRANGEMENT #1 TO THE AGREEMENT BETWEEN THE AMERICAN INSTITUTE IN TAIWAN AND THE COORDINATION COUNCIL FOR NORTH AMERICAN AFFAIRS FOR TECHNICAL COOPERATION IN SEISMOLOGY AND EARTHQUAKE MONITORING SYSTEMS DEVELOPMENT FOR A PROJECT IMPLEMENTATION PLAN FOR THE JOINT EARTHQUAKE MONITORING SYSTEM PROJECT (AD.1992.07.24)

簽訂日期：民國 81 年 07 月 24 日

生效日期：民國 81 年 07 月 24 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) of Taiwan, the designated representative of the monitoring and early warning capabilities in Taiwan.

#### 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/OVEE, 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

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The Project Implementation Plan will contain information that may be utilized by the CWB to seek approval for the development, procurement and installation of an Advanced Earthquake Monitori-

ng System. To develop the Plan, USGS/OEVE and AIT, in consultation with CCNAA and CWB, will:

- A. Identify key seismological factors which influence the design of an Advanced Earthquake Monitoring System.
- B. Define the requirements for an Advanced Earthquake Monitoring System and define its scope of functions and capabilities.
- C. Specify a preliminary Advanced Earthquake Monitoring System Configuration plan.
- D. Specify the role and resource requirements of USGS/OEVE in the development and implementation of an Advanced Earthquake Monitoring System.
- E. Provide an estimated project development and implementation schedule.
- F. Provide preliminary cost estimates for the development, procurement, installation and implementation of an Advanced Earthquake Monitoring System in Taiwan.
- G. Provide technical training to six CWB staff members in U.S. on the basic elements of an Advanced Earthquake Monitoring System in order to obtain comments on its applicability in Taiwan.

#### 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 representatives 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

A. In accordance with the Agreement, CCNAA will reimburse AIT for all costs incurred by USGS/OEVE in association with this Implementing Arrangement.

B. The total cost for activities described in this Implementing Arrangement is mutually agreed not to exceed US \$175,000. 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 USGS, AIT, CCNAA and the CWB.

#### 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, 1993.

FOR THE AMERICAN INSTITUTE  
IN TAIWAN

[Signed]

Deputy Managing Director

DATE: July 22, 1992

FOR THE COORDINATION  
COUNCIL  
FOR NORTH AMERICAN AFFAIRS

[Signed]

Deputy Representative

DATE: July 24, 1992

STATEMENT OF WORK-FOR IMPLEMENTING ARRANGEMENT #1 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) provides for technical cooperation between the U.S. Geological Survey's Office of Earthquakes, Volcanos, and Engineering (USGS/OEVE) and the Central Weather Bureau of Taiwan(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 #1, 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 influence the design of an Advanced Earthquake Monitoring System.
- B. Define the requirements for an Advanced Earthquake Monitoring System and define its scope of functions and capabilities.
- C. Specify a preliminary Advanced Earthquake Monitoring System configuration plan by hardware and software simulation.
- D. Specify the role and resource requirements of USGS/OEVE in the development and implementation of an Advanced Earthquake Monitoring System.
- E. Provide an estimated project development and implementation s-

schedule.

F. Provide preliminary cost estimates for the development, procurement, installation and implementation of an Advanced Earthquake Monitoring System.

G. Technical training to two to four CWB staff members will be conducted by the staff of USGS/OEVE on the basic elements of an Advanced Earthquake Monitoring System in order to obtain comments on its applicability in Taiwan.

#### Task 1. Project Implementation Plan

Performance Period: July 1, 1992 through June 30, 1993.

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, 1992 through June 30, 1993.

Resources Required: man-months

##### 1.0 OEVE Staff

Deliverables: The OEVE staff will conduct one training class in Menlo Park, CA of 2 weeks' duration to two to four CWB staff members on basic elements of an Advanced Earthquake Monitoring System. Detailed class notes will be prepared.

##### 3.0 SCBEDULE

Work will be performed between July 1, 1992 and June 30, 1993 at the OEVE facility in Menlo Park, California. If necessary, OEYE personnel will visit the CWB facility in Taipei, Taiwan, for further consultations during the course of the work. As part of the ongoing activities, preparation of Implementing Arrangement # 2 for the project activities for the period of July 1, 1993 to June 30, 1994 should be completed by June 1, 1993.

Functions

Completion Date

Task 1. Project Implementation Plan      6/30/93  
Task 2. Technical Training                      6/30/93

#### 4.0 BUDGET

As stated in Implementing Arrangement #1, funds available for the tasks described in this Statement of Work will be US \$175,000

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All budget figures are estimates. Actual amounts will be accrued for purposes of fulfilling the financial arrangements described in the Implementing Arrangement #1, 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 92, 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 will be at the invitation of CWB. CWB will provide round-trip air ticket(s) and per diem in Taiwan in local currency at the standard CWB rate.

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

Budget estimates:

OEVE Staff Cost (4-man-months)	\$35,000	
Hardware and software for simulation	50,000	
Non-USGS consultants.		30,000
Teaching materials		5,000
Report preparation and miscellaneous	5,000	
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	Sub-total:	\$125,000

USGS Overhead

Total:

50,000

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\$175,000