

法規名稱：(終)IMPLEMENTING ARRANGEMENT #2 FABRICATION ON ONE NEXT GENERATION ATLAS MOORING TO THE AGREEMENT FOR TECHNICAL COOPERATION IN OCEAN CLIMATE RESEARCH BETWEEN THE TAIPEI ECONOMIC AND CULTURAL REPRESENTATIVE OFFICE IN THE UNITED STATES AND THE AMERICAN INSTITU

終止日期：民國 87 年 09 月 30 日

ARTICLE I-SCOPE

The Implementing Arrangement describes the scientific and technical activities to be undertaken by the National Taiwan University (NTU)/Institute of Oceanography, the designated representative of the Taipei Economic and Cultural Representative Office in the United States (TECRO), and the Pacific Marine Environmental Laboratory (PMEL) of the National Oceanic and Atmospheric Administration (NOAA), the designated representative of the American Institute in Taiwan (AIT). It provides for technical assistance for mooring development operations in the boreal spring 1998 and data processing as part of the South China Sea Monsoon Experiment (SCSMEX) program, plus refurbishment costs for one next generation ATLAS mooring (acquired by NTU under Implementing Agreement #1); the purchase of two (2) additional next generation ATLAS moorings; and the loan of one next generation ATLAS mooring system, from PMEL. The loaned system will be returned to PMEL at the end of the field experiment in 1999.

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 TECRO and AIT for Scientific and Technical Cooperation in Ocean Climate Research. This Implementing Arrangement is hereby attached to that Agreement and becomes part of the Agreement.

ARTICLE III-SERVICES

The next generation ATLAS buoy was originally designed and fabricated to support the Tropical Atmosphere-Ocean (TAO) Array of

moored ocean buoys in the tropical Pacific. The TAO Array, consisting of nearly 70 moored buoys spanning the equatorial Pacific, measures oceanographic and surface meteorological variables critical for improved detection, understanding and prediction of seasonal-to-interannual climate variations originating in the tropics, most notably those related to El Nino/Southern Oscillation (ENSO) events. These buoys provide climate researchers, weather prediction centers, and scientists around the world with real-time data from the tropical Pacific. During the period of Implementing Arrangement #2, PMEL, as designated representative of AIT, will provide the following:

Technical Assistance:

PMEL, as part of the field operations in boreal spring 1998, will provide assistance to recover one, and deploy three, next generation ATLAS moorings in the South China Sea. Costs to TECRO or its designated representative involve travel (air fare, per diem) for a PMEL technician to travel to Taiwan for mooring cruise preparations and for a sea participation in the deployment cruise itself. It is assumed that this cruise will be no more than 14 days' duration. Data processing will involve quality control procedures applied at PMEL in real-time, and in delayed mode after the buoy has been recovered. Data will be provided to TECRO's designated representative, NTU, in near real-time (delay of typically 1 day) after quality checks. The data will also be distributed via the Global Telecommunications System (GTS) for inclusion in operational weather forecasting schemes, and will be incorporated into PMEL's data base which can be freely accessed via anonymous ftp and via the World Wide Web. A complete post-calibrated, quality controlled set of 10-minute data will be provided to NTU after successful recovery of the internally recorded data.

Cost to TECRO or its designated representative: US\$15,000

Refurbishment Costs:

Costs to TECRO or its designated representative incurred under this category relate to refurbishment costs for one next genera-

tion ATLAS mooring previously acquired by TECRO's designated representative under Implementing Agreement #1. Costs to TECRO or its designated representative include the replacement of worn out, damaged or expandable hardware (e.g. steel and nylon cable, anchor, etc.); repair and preparation of the surface toroid for the next deployment; replacement of damaged or lost instrumentation (e.g. electronics tube, temperature modules, etc.); and recalibration of sensors prior to deployment. These refurbishments will be completed at PMEL where the original NTU mooring will be shipped upon recovery. Costs to TECRO or its designated representative for necessary hardware, instrumentation, etc., to perform this service will be US \$15,000. Shipping of the recovered mooring system to PMEL and shipping of the refurbished mooring system back to Taiwan will be covered by TECRO or its designated representative. Both surface and air shipments may be required. Only refurbishment costs for the buoy recovered at the end of the first year's field program are included. It is assumed that refurbishment costs for the three buoys deployed in FY 1998 will be covered under a subsequent Agreement.

Cost to TECRO or its designated representative: US \$ 15,000

ATLAS Systems:

During the period of Implementing Agreement #2, PMEL will fabricate two (2) next generation ATLAS moorings for TECRO's designated representative. Costs to TECRO or its designated representative cover all hardware (buoy, tower, bridle, mooring line, anchor, acoustic release, etc.), all instrumentation and on-board data processing software, all costs associated with calibrations, and the costs of mooring assembly. Shipping of the mooring system to Taiwan (which may require both surface and air shipments)

will be covered by TECRO or its designated representative. The mooring systems will be available for deployment in boreal spring 1998.

Cost to TECRO or its designated representative: US\$55,000 per mooring, total costs for two moorings in US\$110,000

ARTICLE IV-FINANCIAL PROVISIONS

In accordance with the Agreement, NOAA/PMEL, as the designated representative of AIT, is undertaking this work for TECRO's designated representative, NTU. TECRO or its designated representative will reimburse AIT for all costs incurred by AIT or its designated representative in association with this Implementing Arrangement.

The total cost to TECRO or its designated representative for activities described in this Implementing Arrangement is mutually agreed to be US\$140,000. This amount is based upon TECRO or its designated representative paying all shipping charges between the field of operations and Seattle, both prior to deployment and after recovery.

ARTICLE V-INTELLECTUAL PROPERTY CONSIDERATIONS

No intellectual property considerations are expected to arise in conjunction with activities described in this Implementing Arrangement. Existing system designs and computer software of the PMEL next generation ATLAS mooring are in the public domain. Reports, specifications, and computer software prepared under this Implementing Arrangement will also be in the public domain once they have been approved in a final form by the National Taiwan University and NOAA.

ARTICLE VI-EFFECTIVE DATA, 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 the activities described in this Implementing Arrangement is September 30, 1998.

THE TAIPEI ECONOMIC AND
CULTURAL REPRESENTATIVE
OFFICE IN THE UNITED STATES

FOR THE AMERICAN INSTITUTE
IN TAIWAN



[Signed]

Peter P.C. Cheng

Deputy Representative

Date: 6/25/1998

[Signed]

Barbara Schrage

Deputy Managing Director

Date: 6/22/98