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The Office of U.S. Foreign Disaster Assistance (OFDA)

PROGRAM FOR ENVIRONMENTAL DISASTER PREVENTION,  
MITIGATION AND PREPAREDNESS IN DEVELOPING COUNTRIES

QUARTERLY REPORT #4

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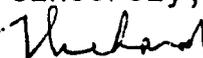
Dr. Barry N. Heyman  
Chief, Prevention, Mitigation & Preparedness  
Office of U.S. Foreign Disaster Assistance  
Food and Humanitarian Assistance Bureau  
Washington, DC 20523-0008

Subject: LAMP Program Cooperative Agreement No. AOT-  
2515-A-00-2125-00 between A.I.D. and the  
World Environment Center (WEC)

Dear Barry,

The purpose of this letter is to forward five (5) copies of the Quarterly Progress Report for a "Program for Environmental Disaster Prevention, Mitigation and Preparedness in Developing Countries". The report describes activities initiated or completed during the period 1 July through 30 September 1993, plus activities in the planning stage for the next quarter and beyond. This Report is being submitted to you in fulfillment of the requirements of Section 1E.2.(c) of the subject Cooperative Agreement (CA).

If you have any questions or comments, please contact me.

Sincerely,  


Richard M. Williams  
Project Manager

cc:

Antony Marcil, WEC/NY  
Jeffrey D. Bell, Grant Officer, Office of Procurement  
PPC/CDIE/DI, Washington, DC 20523-1802 (2 copies)

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Fourth Quarterly Report  
on a Program for Environmental Disaster Mitigation  
and Prevention in Developing Countries

**A. Program Description**

Under a Cooperative Agreement with U.S.A.I.D's Office of Foreign Disaster Assistance (OFDA), the World Environment Center (WEC) is establishing prototype prevention and mitigation programs for environmental and man-made disasters and emergencies in high-risk urban centers in India, Mexico, Indonesia and Thailand.

In India, the program is being managed by WEC in cooperation with the National Safety Council (NSC) of India. In Mexico, the program is managed by WEC through its office in Mexico City, in conjunction with the Ministry of Civil Protection, with whom WEC has signed a broad agreement for cooperation on industrial emergency preparedness activities. In Thailand and Indonesia, the programs are being managed through the local WEC office in each country.

At this phase in the implementation of local accident mitigation and prevention (LAMP) programs in each country, the following activities are being conducted or planned:

<u>Symbol</u>	<u>Activity</u>
SSSS	Conduct APELL Seminar/Workshop at a particular site to promote the active involvement of all local segments in the formulation and activation of community preparedness plans.
AAAA	Assess chemical risks at a particular site and delineate accident prevention measures.
PPPP	Evaluate existing on-site and off-site industrial preparedness plans to respond to identified chemical risks.
TTTT	Training in emergency plan preparation and execution.
MMMM	Training in medical response to chemical emergencies.
DDDD	Organize/oversee mock emergency drills to test the completeness and effectiveness of emergency response plans that have been formulated to counteract particular chemical risks and accident scenarios.

- EEEE Observe/participate in emergency preparedness training and mock emergency drills in the U.S. so as to gain greater understanding of the role of the community in assessing chemical risks and organizing emergency plans.
- RRRR Organize/coordinate training programs in industrial accident and loss prevention in chemical and process industries.
- CCCC Training in establishing chemical information centers, such as poison control centers, chemical transport emergency management (CHEMTREC) centers, etc.
- WWWW Organize/coordinate training programs in the handling of hazardous wastes.

#### B. Overall LAMP Program Implementation Schedule

An overall LAMP implementation schedule (in four segments, I through IV) for implementing the LAMP Program in FYs 93 and 94 is attached. This schedule uses the symbols listed above to specify which activities will be initiated month-by-month in the various target countries. It should be noted that activities already completed are indicated in bold letters.

LAMP program staff (U.S. and overseas) participated in the seminar arranged exclusively for them from 13-16 September by EPA/CEPPO on effective presentation of EPA's "Chemical Emergency Preparedness and Accident Prevention (CEP&AP)" course. The course includes modules in setting up the emergency planning process, conducting a community hazards analysis, developing and testing an emergency plan, and using process safety management to prevent accidents. The participants in the seminar were two WEC/DC staff persons and the LAMP coordinators from WEC's country offices in Mexico, Thailand and Indonesia and a technical training officer from the National Safety Council of India. The leaders of the seminar were three EPA/CEPPO staff persons, who were supported by two contractor personnel from PRC and ICF/Kaiser. Prior to and immediately following the seminar, the WEC participants witnessed a mock emergency drill as organized by a U.S. Local Emergency Planning Committee (LEPC), a HAZMAT team demonstration and a CAMEO demonstration. WEC LAMP coordinators also participated in the International Process Safety Management Conference & Workshop in San Francisco from Sept. 22-24.

### C. Implementation of the LAMP Program in Mexico

The Lamp Program in Mexico is being implemented by the WEC Director in Mexico, in cooperation with the Ministry of Interior -Department of Civil Protection ("Gubernacion").

#### 1. Progress in this Quarter

The LAMP Coordinator from Mexico participated in the CEP&AP seminar and related activities in the U.S. during September.

WEC/Mexico staff are cooperating with local authorities and industry officials in Coatzacoalcos, the ministry of civil protection (Gubernacion), the Mexican chemical manufacturers' association (ANIQ) and the Mexican national environmental protection agency (SEDESOL) to organize an emergency response seminar and exercise in early December. The seminar was originally scheduled for October but had to be postponed because local emergency response officials were engaged in cleanup and restoration work following the destructive hurricane in September. In the seminar, approximately two days will be devoted to reviewing principles of chemical risk assessment, emergency planning, medical response, damage mitigation and strategies for response coordination. On the third day, the roles of local police, medical, fire, industry, social service, communications, etc. will be defined in relation to a hazardous materials desk drill scenario, to be followed by a full-scale emergency exercise the next day.

#### 2. Planned LAMP Implementation Activities

Various proposed LAMP implementation activities are indicated on the master implementation schedule ("I.S.") attached. In the future, there are plans to train community representatives from Monterrey and Guadalajara in basic emergency planning and accident prevention. The training materials are essentially those developed by U.S.EPA\CEPPO for their CEP&AP course and are presently used to train representatives from Local Emergency Planning Committees (LEPC's) in the U.S.

### D. Implementation of the LAMP Program in India

The LAMP program is being implemented through the National Safety Council of India through its branches located in each Indian State.

#### 1. Progress in this Quarter

Presentations in India of CEP&AP Course - Final preparations were being made for the field demonstrations of the CEP&AP

Course in Madras and Bombay cities on October 11-14 and October 18-21, respectively. The course is being presented by a three-member EPA team that had previously been involved in the CEP&AP seminars in the U.S. (see discussion above). In late September, a WEC official arrived in India to help in the local preparations. The CEP&AP course will be given to representatives of local social service clubs, schools, hospitals, fire departments, etc., plus representatives of local industry and government who had previously been involved in the APELL S/Ws conducted in late 1992. The course arrangements are being done by the National Safety Council of India through the NSC Chapters in Tamil Nadu and Maharashtra and will involve many of the same local participants who had been associated with APELL S/Ws and Medical Response to Chemical Disasters presentations in Madras and Bombay. Afterwards, NSC staff will present the "Indianized version" of the CEP&AP course in other cities and communities throughout India.

A senior officer from the National Safety Council participated in the CEP&AP seminars and follow-on program in the U.S. in September.

## 2. Planned LAMP Implementation Activities

APELL-like seminars and workshops ("SSS" on the I.S.) will be presented in early 1994 in Cochin and Kanpur. The programs will follow the pattern of a normal APELL, but will have the maximum involvement of indigenous Indian officials, especially those who had been previous associated with various LAMP activities in Madras and Bombay.

The mock emergency drill originally schedule by the Manali-Ennore Industries Association for early November 1993 has been postponed until late Spring 1994, so as to allow more time for getting planning inputs from local government, fire department and community representatives. This has been indicated by "DDD" on the I.S.

Other tentative dates for proposed exercises and accident prevention training programs are identified on the I.S.

## E. Implementation of the LAMP Program in Thailand

The Lamp Program in Thailand is being implemented by the WEC Office in Bangkok.

### 1. Progress in this Quarter

Presentation in Thailand of CEP&AP Course - WEC/Thailand officials were busy making local arrangements for the presentation in late October of CEP&AP course in Map Ta Phut, in

cooperation with Industrial Estate Authority of Thailand and the Bangpoo Industrial Club. Participants will be drawn from industry, government and community representatives working on or living near the Bangpoo industrial estate, with a smaller representation from Map Ta Phut. The participants will include persons who had been associated with the Medical Response to Chemical Disasters presentation in March 1993 and cooperators from other emergency awareness programs of WEC/Thailand.

The LAMP Coordinator from Thailand participated in the CEP&AP seminars and related activities in the U.S. during September.

## 2. Planned LAMP Implementation Activities

WEC Thailand is arranging a series of training programs relating to worker and public safety, with the technical support of WEC/IEF companies and the U.S. National Fire Protection Association. Four separate courses (other than the CEP&AP course) will be presented from late October to early December, using funds from outside the LAMP program. Local cooperators will be the General Insurance Association, the Ministry of Labor and Welfare and the Bangpoo Industrial Club.

Other tentative dates for proposed accident prevention training programs and mock emergency drills are identified on the I.S.

## F. Implementation of the LAMP Program in Indonesia

The Lamp Program in Indonesia is being implemented by the WEC Office in Jakarta, in cooperation with the Ministry of Population and Environment - Environmental Impact Management Agency (BAPEDAL).

### 1. Progress in this Quarter

The LAMP Coordinator from Indonesia participated in the CEP&AP seminars and related activities in the U.S. during September.

The LAMP Coordinator continued to meet with local industry and government officials from an industrial area between Jakarta and Bogor to help organize an effective joint emergency response plan.

### 2. Planned LAMP Implementation Activities

WEC has been asked by UNEP to finance the participation of two presenters from EPA in the APELL S/W to be held in Lhokseumawe, (AceH from 26 to 29 October 1993). The experts have been identified and their travel is being arranged. A WEC chemical engineer from the New York office will make a presentation at the seminar, also.

During the week following the seminar, the two EPA experts and WEC staff will visit the petrochemical complex at Cilegon and the Bogor industrial estate to assess chemical risks and local emergency response plans. All local contacts and arrangements for these assessments are being made by the WEC/Indonesia LAMP Coordinator. These assessments will be the bases for planning other LAMP initiatives in and near these industrial estates.

Other tentative dates for emergency preparedness, medical response and accident prevention training programs are identified on the I.S.

#### G. Miscellaneous Activities

Consistent with the stated objectives and goals of the program, WEC may undertake miscellaneous activities to prevent or mitigate technological accidents in other developing countries. The specific scope and budget for each activity are defined jointly by WEC and the OFDA Project Officer.

##### 1. Progress in this Quarter

In early July, a contract was signed with the environment and natural resources center of Costa Rica (CEDERENA) to conduct legal investigations into appropriate laws and regulations for hazardous waste management in the country. The study is due to be completed in four to six months.

##### 2. Planned LAMP Implementation Activities

Further efforts will be defined in cooperation with OFDA.

# WEC LAMP PROGRAM IMPLEMENTATION SCHEDULE I

1992/93

COUNTRY/SITE	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
<b>THAILAND</b>								
MTPhut		XXX					HHH	
Bangpoo		XXX			AAPP AAPP		MMM MMM	
<b>MEXICO</b>					HHH			
Coatzl.	XXX							
Montrey.				XXX				
Guadlhr.						YYY		SSS
<b>INDIA</b>								
Madras		SSS						
Bombay		XXX					MMM	
Kanpur							MMM	
<b>INDONESIA</b>								
Lhoksmwe.							HHH	
Cilegon						XXX		
<b>MISC. ACTIVITIES</b>								
Brazil				SSS				
Jamaica							AAPP	
Costa Rica								SCT

### LEGEND

XXX PRE SEMINAR/WORKSHOP MEETINGS (planned) (* = tentative) (actual)	SCT SCOUTING VISIT
YYY PRE SEMINAR/WORKSHOP SITE CHECK	SSS APELL SEMINAR/WORKSHOP
AAA SITE RISK ASSESSMENT	PPP SITE PLAN ASSESSMENT
TTT TRAINING IN EMERGENCY PLANNING	MMM TRNG. IN MED. RESPNS. TO CHEM. EMERGENCIES.
DDD MOCK EMERGENCY DRILL	HHH HIRING OF LOCAL EMERG. PREP. STAFF

# WEC LAMP PROGRAM IMPLEMENTATION SCHEDULE II

1993

COUNTRY/SITE	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV
<b>THAILAND</b>								
MTPhut						TTEE		
Bangpoo							TTT	
							TTT	
<b>MEXICO</b>								
Coatzl.						TTEE		
Montrey								
Guadlhr.								
<b>INDJA</b>								
Madras						TTEE		
Bombay							TTT	
Kanpur		YYY					TTT	
<b>INDONESIA</b>								
Lhoksmwe.						TTEE		
Cilegon								SSS
Bogor								AAPP
								AAPP
<b>MISC. ACTIVITIES</b>								
Jamaica		YYY						
Costa Rica								

### LEGEND

- |     |   |           |                                 |          |
|-----|---|-----------|---------------------------------|----------|
| YYY | PRE SEMINAR/WORKSHOP MEETINGS               | (planned) | (* = tentative)                 | (actual) |
| SSS | APELL SEMINAR/WORKSHOP                      | AAA       | SITE RISK ASSESSMENT            |          |
| PPP | SITE PLAN ASSESSMENT                        | TTT       | TRAINING IN EMERGENCY PLANNING  |          |
| MMM | TRNG. IN MED. RESPNS. TO CHEM. EMERGENCIES. | DDD       | MOCK EMERGENCY DRILL            |          |
| EEE | EMERGENCY EXERCISE TRAINING IN U.S.         | RRR       | TRAINING IN ACCIDENT PREVENTION |          |



# WEC LAMP PROGRAM IMPLEMENTATION SCHEDULE IV

1994/95

COUNTRY/SITE	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN
<b>THAILAND</b>			CCC*					
MTPhut				WWW*			DDD*	
Bangpoo				WWW*			DDD*	
<b>MEXICO</b>			CCC*					
Coatzl.				WWW*			DDD*	
Montrey				WWW*			DDD*	
Guadlhr.				WWW*			DDD*	
<b>INDIA</b>			CCC*					
Madras				WWW*				
Bombay				WWW*				
Kanpur				WWW*			DDD*	
Cochin				WWW*			DDD*	
<b>INDONESIA</b>			CCC*					
Lhoksmwe.						WWW*		DDD*
Cilegon				RRR*		WWW*		DDD*
Bogor				RRR*		WWW*		DDD*
<b>MISC. ACTIVITIES</b>								

### LEGEND

YYY	PRE SEMINAR/WORKSHOP SITE CHECK	(planned)	(* = tentative)	(actual)
SSS	APELL SEMINAR/WORKSHOP	AAA	SITE RISK ASSESSMENT	
PPP	SITE PLAN ASSESSMENT	TTT	TRAINING IN EMERGENCY PLANNING	
MMM	TRNG. IN MED. RESPNS. TO CHEM. EMERGENCIES.	DDD	MOCK EMERGENCY DRILL	
EEE	EMERGENCY EXERCISE TRAINING IN U.S.	RRR	TRAINING IN ACCIDENT PREVENTION	
CCC	TRAINING IN CHEM. INFO. CTRS.	WWW	TRAINING IN HAZARDOUS WASTE HANDLING	

REVISED 10/18/93