

REPORT ON

**TRAINING WORKSHOPS IN EFFECTIVE
MANAGEMENT OF HAZARDOUS MATERIALS,
HAZARDOUS WASTES AND CONTAMINATED SITES**

WORKSHOP REPORT

CHUUK, FEDERATED STATES OF MICRONESIA

Submitted to :

South Pacific Regional Environment Programme
PO Box 240
Apia, Samoa

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ACRONYMS

CPUC	Chuuk Power and Utilities Company
CTO	Chuuk Transportation Office
DCO	Disaster Control Office
EPA	Environmental Protection Agency
FSM	Federated States of Micronesia
PCBs	Polychlorinated Biphenyls
PICs	Pacific Island Countries
POPs in PICs	Persistent Organic Pollutants in Pacific Island Countries Project
PPE	Personal Protective Equipment
SPREP	South Pacific Regional Environment Programme
TBA	To Be Announced

1.0 INTRODUCTION

Management of hazardous materials, hazardous wastes and contaminated sites has become an increasingly important issue for Pacific Island Countries (PICs). In 1997, AusAID, in conjunction with SPREP, implemented the Persistent Organic Pollutants in Pacific Island Countries project (POPs in PICs) to address this issue. As part of the POPs in PICs project, training workshops will be held in thirteen PICs to create awareness and understanding on the **effective management of hazardous materials, hazardous wastes and contaminated sites**.

A five day training workshop was delivered in **Chuuk, FSM** during the period 22-26, January 2001 and included interactive activities and exercises, site inspections and practical field demonstrations. The workshops were designed and delivered by Golder Associates under contract to SPREP with the following objectives:

- To upgrade Chuuk's capacity for the effective management of hazardous materials and hazardous waste;
- To upgrade Chuuk's capacity for effective management of contaminated sites;
- To encourage the development of specific strategies for managing hazardous materials in Chuuk; and
- To raise awareness in Chuuk's communities of issues associated with the generation and management of hazardous wastes.

Prior to the workshop commencing, a Pre-Workshop Questionnaire was prepared and distributed to workshop participants. The purpose of the questionnaire was to obtain preliminary information on participants understanding of hazardous materials management and any desired workshop outcomes. However, no responses were received from workshop participants.

2.0 WORKSHOP PARTICIPANTS

2.1 Organisations Represented

A complete list of workshop participants is provided in Appendix A.

2.2 Organisations Not Represented

Several applicable organisations were unable to send a representative to the training workshop, including:

- Civic Action Team;
- Department of Planning and Statistics;
- Department of Public Safety;
- Department of Education;

- Customs Department;
- Department of Public Health;
- Chuuk Hospital; and
- Members of the automotive industry.

3.0 MAJOR ISSUES IDENTIFIED

The following major in-country issues were agreed by workshop participants, in order of priority:

1. There is a need for a central location for the **control and storage of hazardous wastes** (ie. landfill).
2. There is a need for controlled local facilities for the **disposal of non-hazardous wastes**. It is important to ensure that hazardous wastes are restricted to designated hazardous waste storage areas and **separated from non-hazardous waste storage areas**.
3. There is a need for dealing with **hospital wastes** (ie. repairs to the old hospital incinerator or acquisition of a new one).
4. There is a need for the enforcement of **proper worker safety training**.
5. There is a need for **upgrading of the sewage treatment system**. The current system has deteriorated such that the sewage currently enters the lagoon untreated.
6. There is a need for **enforcement measures** for the dumping of chemical by-products at the fibreglass manufacturing plant.
7. There is a need to **control imports** including hazardous chemicals and used cars that emit hazardous fumes. Vehicles that don't meet environmental standards in foreign countries are easily imported and sold in FSM.

4.0 COUNTRY REPORT UPDATE

The following current information was obtained from participants and/or during site inspections:

- The Weno Power Plant (Chk03) owned by Chuuk Power and Utilities Corporation contains transformers, waste oil, diesel and petrol tanks. There are a number of locations on the site where spills have occurred. The potential receptors include a residence with children who play on the transformers, the neighbouring Department of Agriculture nursery and a surface water drainage ditch immediately downgradient of the site. The site needs to be remediated immediately, the receptors should be informed as to the chemical hazards and housekeeping procedures should be implemented;
- The pesticides stored at the Former Government Pesticides Store (Chk05) were moved to the storage area at Chk01. Therefore there is no source present at Chk05, however the soil and building still show visible contamination.

- The pesticides storage site at Weno (Chk01) is in a leaking shipping container which has deteriorated. An attempt to repackage the pesticides was made in 2000, but was unsuccessful. The personnel working on the repackaging and storing experienced nausea and dizziness. The materials are currently stored in an unacceptable condition. Residents in the area continue to complain of sickness and various respiratory ailments.
- The contaminants in the containers at the Former Japanese Bulk Fuel Depot (Chk07) have been removed however the soil remains visibly contaminated.

5.0 EVALUATION ISSUES

The following issues were noted in the daily workshop evaluation forms:

1. There is a need for first aid training and procedures to be implemented;
2. There was a request for additional time (ie. additional week) to be spent on an extensive program for detailing the properties of hazardous wastes;
3. There was a request for yearly workshops to update/refresh participants;
4. There is a need to hold follow up workshops and involve additional agencies including the private sector; and
5. There is a need for the improvement of legislation and control of the importation of hazardous chemicals to FSM.

6.0 ACTION PLANS

6.1 General Action Plan

To address the identified major issues, workshop participants developed and agreed to implement the Action Plan shown in Table 1 below.

Table 1 – General Action Plan for Chuuk

ACTION	WHO	TIMELINE	STATUS
Coordinate Funding for PPE and other equipment (ie. computer facilities)	EPA, National Government, Foreign Aids	Immediately	
Coordinate a system to deal with existing stockpiles of pesticides and PCBs.	EPA, Department of Agriculture, Disaster Control Office, CPUC, Chuuk Transportation, Department of Public Safety, Department of Public Works, Civil Action Team	Upon availability of above funding	
Raise Public Awareness (ie. Radio programs and training for other government agencies and departments)	EPA, Department of Education	Immediately	
Commence efforts to implement a hazards benefit allowance for personnel	State Government, National Government, Private Sectors	10/01	
Efforts to attain technical assistance for sampling and analysis at PCB contaminated sites	EPA, National Government	03/01	
Designate a central storage location for hazardous wastes	EPA	02/01	
Control the importation of substances	EPA, Customs, Department of Public Safety	03/01	
Implement the enforcement of existing environmental regulations	EPA, Department of Public Safety, State Government	06/01	

6.2 Action Plan for Existing Stockpiles

A proposed action plan to manage existing stockpiles of hazardous materials was developed by participants, following the site inspections, as shown in Table 2.

Table 2 – Action Plan for Existing Stockpiles

SITE NO.	SITE ACTIVITY	PROBLEMS	ACTION	RESPONSIBILITY
Chk01	Leaking Shipping Container and Pesticide site	Uncontrolled spills	- Request for technical assistance for cleanup - Attain funding for appropriate PPE and containers - Implementation of site management practises - Document incidents	EPA, Chuuk Hospital
Chk03	CPUC – Power Station	Uncontrolled spills, poor housekeeping	- Implementation of site management practises; - Remediation of waste oil spills; and - Informing receptors (neighbouring residents and department of agriculture) of hazards in the area.	EPA, CPUC

7.0 RECOMMENDATIONS

Based on the training workshop outcomes, Golder Associates recommendations to achieve the defined project objectives in Chuuk are outlined in Table 3 below.

Table 3 – Recommendations Arising From Workshop

RECOMMENDATION	RESPONSIBILITY
1. Upgrade coverage of hazardous materials regulations (ie. imports, transportation, storage, handling, use and disposal).	Customs, EPA,
2. Undertake a public awareness campaign in 2001 to raise awareness of chemicals.	Education, EPA
3. Prepare an induction training module on chemicals safety for Chuukese workers.	TBA
4. Set up a central location for hazardous materials distribution or storage site for Chuuk. Arrange for central purchasing of agricultural chemicals.	EPA
5. Establish a local chemicals information clearing house to support chemicals' users and allow site management plans to be developed.	EPA, DCO, Chuuk Transportation
6. Implement first aid training specifically for exposure to hazardous materials.	TBA

7. Establish measures of enforcing existing regulations (ie. pesticides regulations)	EPA
8. The leaking shipping container (Chk01) requires immediate attention. A site management plan, health and safety plan and an emergency response plan should be implemented. The site urgently requires cleanup . Action is essential to avoid further damage and incident.	EPA
9. The Weno Power Plant requires the implementation of a site management plan and worker training on proper housekeeping skills at the plant site.	

GOLDER ASSOCIATES PTY LTD

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APPENDIX A

Workshop Participants

WORKSHOP PARTICIPANTS

CHUUK, FSM

Name

Organisation

Workshop Participants (18)

Julita Albert	Chuuk State, EPA
Kulian William	Chuuk State, Fire Division
Nathan Leedy	Chuuk State, EPA
Herry Silo	Chuuk State, Disaster Control Office
Ismael Mikel	Chuuk State, Department of Agriculture
Saimon Refit	Chuuk State, Department of Agriculture
Troy Larsen	Chuuk State, Department of Agriculture
Tarsis Takasy	CPUC
Mercy D. Sos	Chuuk State, EPA
Abdon S. Martam	Yap State, EPA
Elmud Yleizzle	Chuuk State, EPA
Aloysius Wag	Yap State, Environmental Health
Laurence Yug	Yap State, Environmental Health
Leonard D. Yinug	Yap State, EPA
Sichimichy Kichiro	Chuuk Transport
Francis Falan	Yap State Public Utilities Corporation
Herbert Osawa	Chuuk State, EPA
Curtis Sos	Chuuk State, EPA

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