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**U.S./INDONESIA JOINT OIL SPILL RESPONSE WORKSHOP**

**Indonesia**  
**January 31 - February 2, 1995**

**Prepared for:**

**US - ASIA ENVIRONMENTAL PARTNERSHIP**



**WORLD ENVIRONMENT CENTER**

## DISCLAIMER

This project was sponsored by the U.S. Agency for International Development (USAID) through the World Environment Center's (WEC) Cooperative Agreement in support of the U.S.-Asia Environmental Partnership (US-AEP). The opinions expressed herein are the professional opinions of the author and do not represent the official position of the Government of the United States of America or the World Environment Center.

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## I. EXECUTIVE SUMMARY

The U.S. Minerals Management Service (MMS) and the Indonesian Agency for Assessment and Application of Technology (BPPT) jointly sponsored a workshop entitled "Oil Spill Contingency Planning and Management" from January 31 to February 2, 1995 in Jakarta, Indonesia. The U.S.-Asia Environmental Partnership (US-AEP)/World Environment Center (WEC) Environmental Business Exchange (EBE) program sponsored participation in the workshop by four U.S. private sector representatives.

The EBE participants were as follows:

- Mr. Steven R. Blackbourn, Sales Manager, MARCO Pollution Control;
- Mr. Robert J. Dalton, Executive Vice President, Global Industries Corporation;
- Dr. William T. Gorham, Program Manager and Senior Scientist, ENSR Consulting and Engineering; and
- Mr. Atle B. Nordvik, Director, Applied Engineering Department, Marine Spill Response Corporation.

Each of the four EBE participants made presentations during the workshop and participated in the workshop discussions. The presentations highlighted the EBE participants' experience in various aspects of oil spill response and contingency planning. Approximately 250 people from Indonesia and the U.S. attended the workshop.

In addition to participation in the workshop, the EBE participants held meetings with representatives of Indonesian government and industry. The purpose of these meetings was for the EBE participants to explore business opportunities in Indonesia.

As a result of the workshop and meeting discussions, the EBE participants identified several business opportunities in Indonesia for their respective organizations.

Funding for this project was provided through a Cooperative Agreement between the World Environment Center (WEC) and the United States-Asia Environment Partnership (US-AEP), the U.S. Agency for International Development (USAID).

## II. INTRODUCTION

The U.S. Minerals Management Service (MMS) and the Indonesian Agency for Assessment and Application of Technology (BPPT) jointly sponsored a workshop entitled "Oil Spill Contingency Planning and Management" from January 31 to February 2, 1995, in Jakarta, Indonesia. The U.S.-Asia Environmental Partnership (US-AEP) Environmental Business Exchange (EBE) program sponsored participation in the workshop by four U.S. private sector representatives.

The EBE participants were as follows:

- Mr. Steven R. Blackburn, Sales Manager, MARCO Pollution Control;
- Mr. Robert J. Dalton, Executive Vice President, Global Industries Corporation;
- Dr. William T. Gorham, Program Manager and Senior Scientist, ENSR Consulting and Engineering; and
- Mr. Atle B. Nordvik, Director, Applied Engineering Department, Marine Spill Response Corporation.

MARCO Pollution Control, a division of the Marine Construction and Design Company (MARCO) of Seattle, Washington, manufactures marine oil spill recovery vessels and systems. Global Industries Corporation is an environmental engineering and infrastructure construction corporation headquartered in Singapore, with offices in the U.S., Thailand, and West Africa. ENSR Consulting and Engineering is an environmental services firm with locations throughout the United States. The Marine Spill Response Corporation is an integrated national oil spill response organization headquartered in Washington, D.C.

Other participants in the workshop included representatives of the Indonesian Directorate General for Oil and Gas, Environmental Impact Management Agency (BAPEDAL), Directorate of General Sea Transportation, PERTAMINA, Indonesian private sector organizations, U.S. Environmental Protection Agency (EPA), U.S. Coast Guard (USCG), National Oceanic and Atmospheric Administration (NOAA), and U.S. private sector organizations.

### III. WORKSHOP ACTIVITIES

A workshop entitled "Oil Spill Contingency Planning & Management" was held from January 31 to February 2, 1995 in Jakarta, Indonesia. Approximately 250 participants from Indonesia and the U.S. attended the workshop. The workshop agenda is included as Appendix A.

During the first day of the workshop, speakers from U.S. and Indonesian governmental agencies reviewed the current status of laws and regulations related to oil spill prevention and response in their respective countries. Presentations were also given on current technology for identifying, containing, and cleaning up spills. Finally, representatives of the U.S. Environmental Protection Agency (EPA) and the U.S. Coast Guard (USCG) presented reviews of recent oil spill events.

During the second day of the workshop, three concurrent sessions of panel discussions and audience participation were held to assess the current status of and to make recommendations for follow-up actions on the following topics:

- Laws and Regulations Pertaining to Oil Spill Response/Contingency Planning;
- Oil Spill Response Techniques, Equipment, Material and Processes; and
- Application, Remote Sensing, Trajectory Analysis.

The findings and recommendations from each of these sessions are summarized in Appendix B.

On the final day of the workshop, a general session was held to review the findings and recommendations of the workshop participants. In addition, documents were drafted for submittal to the Indonesian and U.S. governments reporting on the results and recommendations from the workshop.

Each of the four EBE participants made presentations during the workshop and participated in the workshop discussions. A summary of the EBE participants' presentations and workshop participation is given below.

#### **A. MARCO Pollution Control - Steven Blackbourn, Sales Manager**

Mr. Steven Blackbourn, Sales Manager, MARCO Pollution Control, gave a ten minute presentation during the first day of the workshop. The presentation included an overview of MARCO Pollution Control and its product line, and a description of several actual oil spill scenarios involving MARCO oil spill recovery vessels and systems.

During a session on the second day entitled "Oil Spill Response Techniques, Equipment, Materials and Processes", Mr. Blackbourn gave a presentation on the

MARCO Oil Recovery Vessel specially designed and constructed for MAXUS Oil Company for their operation in Southeast Sumatra. This vessel was designed to handle the high wax content, high pour point crude oil produced in the region.

**B. Global Industries - Robert Dalton, Executive Vice President**

On the first day of the workshop, Mr. Robert Dalton, Executive Vice President, Global Industries, presented information on Global Industries' first response capabilities to oil spills based on 15 years experience working on major oil spill disasters throughout the world.

Mr. Dalton also participated in the individual sessions on "Application of Oil Spill Response Technology" on the second day of the workshop.

**C. ENSR Consulting and Engineering - William Gorham, Program Manager and Senior Scientist**

Dr. William Gorham, Program Manager and Senior Scientist, ENSR Consulting and Engineering, gave a presentation on oil spill contingency plan preparation during the first day of the workshop. During the second day of the workshop, Dr. Gorham participated in the session on "Laws And Regulations Pertaining To Oil Spill Response And Contingency Planning."

**D. Marine Spill Response Corporation - Atle Nordvik, Director of Applied Engineering Department**

Mr. Atle B. Nordvik, Director, Applied Engineering Department, Marine Spill Response Corporation (MSRC), presented a paper at the workshop related to MSRC's response capabilities, organizational structure and availability of oil spill technologies.

#### IV. MEETINGS HELD AND FACILITIES VISITED

The EBE participants held the following meetings in conjunction with their workshop participation.

##### A. January 27, 1995 - MAXUS Southeast Sumatra, Inc., Jakarta, Indonesia

Mr. Steven Blackburn of MARCO Pollution Control met with the following representatives of MAXUS Southeast Sumatra, Inc. (MAXUS): Mr. Warren C. White, Superintendent of Engineering; Mr. Jim Smith, Environmental Engineer; Mr. C.W. "Bill" Murray, Jr., Production Manager; and Mr. Huala Madapdap, Engineer. The purpose of the meeting was to review the status of the MARCO oil spill recovery vessel delivered to MAXUS in the fall of 1993. The contract also included technology transfer to MAXUS in the form of design and welding specifications for the construction of several 36-foot, 340-barrel capacity welded aluminum barges. The barges are now complete and a second training/drill session is being organized for March or April of 1995. MARCO will be hired as a consultant for the training drill contemplated by MAXUS. The MAXUS representatives provided an overview of oil pollution concerns in Indonesia.

##### B. January 30, 1995 - PT Dutamarine Shipyard, Surabaya, Indonesia

Mr. Blackburn of MARCO Pollution Control met with Mr. Agoes Bintoro of PT Dutamarine Shipyard to discuss MARCO's role as a procurement agent for a 32-meter tug boat being built in Indonesia as part of a U.S. Exim Bank project awarded to Ellicott Machine Corporation of Baltimore, Maryland. Ellicott will procure U.S. components through MARCO as part of a 70 percent content requirement for the Exim bank funding.

##### C. January 30 - February 2, 1995 - U.S. Embassy, Jakarta, Indonesia

On January 30, 1995, the EBE participants met with Mr. Sid Smith, Counselor for Scientific and Technological Affairs, Economic Section, U.S. Embassy. Mr. Smith presented information on Indonesia and provided some insights on doing business in Indonesia. The EBE participants also reviewed each presenters role in the workshop and agreed upon the order of presentations.

Mr. Smith indicated that the Indonesians' objective for the workshop was to identify procedures which have worked in the U.S. to prepare for and respond to oil spills. The American objective for the workshop, according to Mr. Smith, was to provide an introduction to the Indonesian market for U.S. technology and products through a sharing of experience and information.

On February 1 and 2, Dr. Gorham of ENSR Consulting and Engineering held follow-up meetings with Mr. Smith to discuss ways in which ENSR might successfully participate in the environmental response, cleanup, and documentation business in Indonesia. Mr. Smith referred to an evolving effort through the U.S. Geological Survey (USGS) for mapping resources within Indonesia and provided contact information at USGS for more information. Mr. Smith also provided additional information about the scope of needs in Indonesia in the area of marine resource planning.

**D. January 31, 1995 - VICO Indonesia, Jakarta, Indonesia**

During the first day of the workshop, Dr. Gorham of ENSR Consulting and Engineering had the opportunity to speak to Mr. Wahyu Affandi, Environmental Engineer, of VICO Indonesia. Mr. Affandi indicated that VICO has basic spill response plans, although they are not as advanced as those prepared for U.S. regulations. Mr. Gorham provided him with information on ENSR's spill plan preparation capacity and experience.

**E. February 1, 1995 - U.S. Foreign Commercial Service/U.S.-Asia Environmental Partnership, Jakarta, Indonesia**

On February 1, 1995, the EBE participants visited the U.S. Foreign Commercial Service located in the World Trade Center. They were given a brief introduction to the center by Mr. Michael Hand, Counselor of Embassy for Commercial Affairs, who explained the opportunities for support that the Service could provide to U.S. businesses both during their stay in Jakarta and back in the U.S. Mr. James Whittle, Director, US-AEP/Jakarta, presented information on US-AEP programs. Support offered by these two organizations include logistical support for holding meetings, local intelligence on potential teaming partners, and insights into customs which might affect business relationships. US-AEP is also a potential source for funds for feasibility studies.

In a separate meeting, Mr. Blackburn of MARCO Pollution Control met with Mr. Hand to discuss MARCO's participation in the Blue Book Project 32.940248, "Procurement of Marine Disaster Prevention Ships" for the Indonesian Department of Sea communications. The value of this project is US\$48,120,000. A catalog of MARCO commercial fishing products was left with Mr. Hand for future reference and to serve as an introduction to appropriate Indonesian government agencies.

**F. February 1, 1995 - CalTex, Jakarta, Indonesia**

During the second day of the workshop, Dr. Gorham of ENSR Consulting and Engineering discussed the differences between the Indonesian and U.S. systems and approaches for oil spill response with Mr. I.M. Surya Kusuma of CalTex. CalTex is a joint venture of Chevron and Texaco. Dr. Gorham arranged to provide

information to CalTex on ENSR's general planning and hazardous materials removal and cleanup capability.

**G. February 2, 1995 - Department of Communications, Jakarta, Indonesia**

Mr. Blackburn of MARCO Pollution Control met with Drs. C. Sutikno, Head of Sub-Directorate, Ship's Readiness, Department of Communications and Mr. Kiemens Yohanes of PT Idee Murni Pratama on February 2, 1995. The purpose of the meeting was to discuss the "Marine Disaster Prevention Ship" project. Drs. Sutikno is the technical manager for this project. The specifications were discussed along with financing requirements. Drs. Sutikno expressed interest in visiting the U.S. Coast Guard operations to observe fire fighting, oil spill abatement and rescue in the U.S.

Captain Lumenta, Senior Scientist for Sea Communications, will be attending the 1995 Oil Spill Conference in Long Beach, California on February 27 - March 3, 1995. Arrangements were made for a meeting between Captain Lumenta and MARCO representatives in Long Beach.

**H. February 3, 1995 - Agency for Assessment and Application of Technology (BPPT), Jakarta, Indonesia**

On February 3, 1995, Dr. Gorham of ENSR Consulting and Engineering met with Mr. A. Karsidi, Head of Remote Sensing & GIS Laboratory; Dr. Ir. Indroyono Soesilo, Director of Technology for Natural Resources Inventory; and Ir. Heri Sadmono, Remote Sensing & GIS Specialist of the Agency for Assessment and Application of Technology (BPPT). Dr. Gorham presented a Regional Resource Manual prepared by ENSR Consulting and Engineering for four California oil spill cooperatives. The BPPT staff were particularly interested in the presentation of information in geographic information system (GIS) format. A discussion was held regarding the difficulties of getting complete sets of data for incorporation into layers of the GIS maps.

In a separate meeting, Mr. Robert Dalton of Global Industries Corporation met with Dr. Ir. Indroyono Soesilo to discuss Global Industries Corporation's capabilities to conduct commodity trade to finance environmental projects. Dr. Soesilo provided a commercial banking contact at the NUSA Bank for future reference.

**I. February 3, 1995 - Mobil Oil Indonesia Inc., Jakarta, Indonesia**

Dr. Gorham of ENSR Consulting and Engineering met with Mr. Abdul Halim Hamid, Manager of Loss Prevention and Control; Mr. A Ridha Joenoes, Loss Prevention Engineer; and Henry Sutanto, Staff Environmental Engineer, Mobil Oil Indonesia Inc. The Mobil representatives expressed interest in ENSR's full range of capabilities, including those in the areas of hazardous materials clean-up and toxicity testing.

Dr. Gorham arranged to send information on ENSR's general services and toxicological services.

## V. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of each of the EBE participants is presented below.

### A. Mr. Steven Blackburn, MARCO Pollution Control

- MARCO has a good potential for winning a contract with the Indonesian Sea Communication for two marine disaster prevention ships. MARCO will need to continue working with various U.S. and Indonesian agencies to successfully see this project through to fruition. Mr. Blackburn's visit to Indonesia was a key point in strengthening MARCO's relationship and increasing MARCO's credibility with the Indonesian Sea Communications.
- The Indonesian viewpoint on oil spill abatement needs to be updated to include biological and economic impact of long-term oil releases and subsequent use of dispersant. Continuing education and scientific evaluation of impact to sea life reefs, and beaches needs to be highlighted with economic evaluation of fishing and tourism losses due to oil contamination.
- Indonesia's oil spill abatement infrastructure needs to be strengthened to enable fast and thorough response to major and minor oil spills. Procurement of a "tool box" approach to oil spill abatement equipment should be employed with a variety of oil boom, skimmers, skimming vessels, recovered oil storage barges and pumps, etc. Also, training of labor and management personnel should be accomplished on an ongoing basis with routine table top and on-water exercises to sharpen skills. Finally, contingency plans, mapping, and tracking technologies need to be formalized and implemented.
- The enforcement of oil spill legislation seems to be lacking in Indonesia. The government needs to enforce these laws according to IMO standards, implement oil fingerprinting techniques, and insure that Pertamina, the private oil companies, and the transiting oil tankers are responsible for their own oil spill situations. This responsibility should be either through their own companies or designated government agencies which can "charge" the responsible party with oil spill abatement costs. Using the model of the Oil Pollution Act of 1990 in the U.S., a specific "Oil Spill Responsible Organization" (OSRO) should be named for each potential spiller.

### B. Mr. Robert Dalton, Global Industries Corporation

- The Oil Spill Contingency Planning & Management Workshop in Jakarta was a success and was well received by the host nation. Participation by the U.S. private sector was a significant asset to the workshop.

- Future workshops of this type should solicit more host country private participation.
- The Commercial Center in Indonesia should take the lead in providing business contacts during all such workshops and conferences in the future.
- A larger conference on Oil Spill and Toxic Waste Disposal should be conducted to include all Southeast Asian nations or ASEAN member states.

**C. Dr. William Gorham, ENSR Consulting and Engineering**

- There are many opportunities for environmental firms in Indonesia. However, there is little demand for traditional regulatory compliance assistance projects. Therefore, focus needs to be put on providing practical solution to real problems.
- Opportunities exist for U.S. firms to assisting the Indonesian government in identifying problems and drafting regulations. However, in discussions with several representatives of both the Indonesian and U.S. governments, it also appears that there is a substantial lag from the identification of environmental problems, to the passing of regulations, to the implementation and enforcement of those regulations.
- Some of the most pressing problems facing Indonesia center around identifying and dealing with toxic substances or organisms affecting human health. These contaminants include substances biologically derived from untreated sewage in the canals which traverse Jakarta and serve as the city's sewer system. Contaminants also come from the extensive air pollution caused by automobile congestion. Another source of contaminants is the waste streams generated by the growing industrial sector.
- There are fundamental decisions which the Indonesians must make as to how best to protect their resources, both renewable and non-renewable. The best contribution by the U.S. would be to provide insights as to how simple systems have been effective in protecting a large segment of such resources. For example, relatively simple solutions such as separating and collecting sewage, using non-hazardous chemicals, or planning for growth can reap significant benefits without major costs.

**D. Mr. Atle Nordvic, Marine Spill Response Corporation**

- There is a lack of understanding and knowledge about marine oil spill response methods and technologies. Training and technology transfer and organization of national response capabilities/systems are needed.

- Future follow-up opportunities for the Marine Spill Response Corporation exist in the following areas: 1) contingency planning, 2) training and exercises, 3) operation and management of oil spill clean-up activities.

**APPENDIX A**  
**WORKSHOP AGENDA**

# OIL SPILL RESPONSE WORKSHOP

JAKARTA, INDONESIA

JANUARY 31 - FEBRUARY 1 - 2, 1995

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Co-sponsored by the Indonesian Agency for the Assessment and Application of Technology (BPPT), the US Minerals Management Service (MMS) and the US Asia Environmental Partnership (US-AEP) with participation by the Indonesian Directorate General for Oil and Gas, Environmental Impact Management Agency (BAPEDAL), Directorate General of Sea Transportation, PERTAMINA, Indonesian private sector organizations, US Environmental Protection Agency (EPA), US Coast Guard (USCG), National Oceanic and Atmospheric Administration (NOAA) and US private sector organizations.

\* JANUARY 31 - MORNING :

No.	Time	Speaker	Topics	Moderator
0	08.00 - 08.30		REGISTRATION	
1	08.30 - 08.45	Prof. M.T. Zen, Deputy Chairman for Natural Resources Development, BPPT  Mr. Sidney Smith, Science counselor, US Embassy	Introduction / Opening Remark  Introduction / Opening Remark	Ir. Aunur Rofiq, MSc.
2	08.45 - 09.10	Mr. P. L. Croutrier, Deputy II for Development, BAPEDAL	Environmental Impact Policy on Oil Spill Prevention in Indonesian	Ir. Aunur Rofiq, MSc.
3	09.10 - 09.35	Mr. Rishi Tyagi, MMS	US Laws and Regulations on Oil Spill Response Requirement	
4	09.35 - 10.00	===	Coffee break	

5	10.00 - 10.25	Mr. Soentoro, Directorate General of Sea Communication	Method and Management of Oil Prevention in Indonesia	Ir. Aunur Rofiq, MSc.
6	10.25 - 10.50	Mr. Joseph Mullin, MMS	Response Techniques (mechanical, chemical, biodegradable, in-situ burning)	
7	10.50 - 11.15	Ir. T. Husin Yoesoef, Ka.Dinas Pelabuhan, Pertamina	Preparedness and Response on Marine Oil Spill (View of Oil Company)	Ir. Aunur Rofiq, MSc.
8	11.15 - 11.40	Mr. James Staves, EPA	Contingency Planning	
9	11.40 - 12.10	Dr.Ir.Indroyono Soesilo, MSc., Director, Directorate of Technology for Natural Resources Inventory, BPPT	Remote Sensing in Relation to Oil Spill Planning in Indonesia	Ir. Aunur Rofiq, MSc.
		Dr. John Hill, Houston Advance Research Center	Remote Sensing in Relation to Oil Spill Planning	

**\* JANUARY 31 - AFTERNOON**

No.	Time	Speaker	Topics	Moderator
10	12.10 - 13.00	=====	Lunch	=====
11	13.00 - 13.30	Prof. M.T. Zen, Deputy Chairman for Natural Resources Development, BPPT	Technological Assessment for Oil Spill Contingency Response Planning and Management in Indonesia	Dr.Ir.Indroyono Soesilo, MSc.

12	13.30 - 13.55	Dr. Jerry Galt, National Oceanic and Atmospheric Administration (NOAA) <del>Robert</del> DALTON	Trajectory Analysis	Dr. Ir. Indroyono Soesilo, MSc.
13	13.55 - 15.10	<del>Terry Taylor,</del> Global Industries Corporation Neil Challis, National Response Corporation Dan Conaster, JBF Scientific Company Steve Blackburn, MARCO Bill Gorham, ENSR Atle Nordvik, Marine Spill Response Corporation	Oil Spill Response Equipment and Materials	Dr. Ir. Indroyono Soesilo, MSc.
14	15.10 - 15.40	=====	Coffee break	=====
15	15.40 - 16.05	Captain Philip Wieczynski, USCG	Application (Spill Planning, Exercise and Response System; Response Tactical Action Display; team-building enhancement; pollution incident simulation control and Evaluation; electronic chart display information system)	Dr. Ir. Indroyono Soesilo, MSc.
16	16.05 - 16.30	Mr. James Staves, E P A Captain Philip Wieczynski, USCG	Case Histories	Dr. Ir. Indroyono Soesilo, MSc.
17	16.30	=====	Adjourn	=====

**APPENDIX B**  
**SUMMARY OF WORKSHOP RECOMMENDATIONS**

SEMINAR INDONESIA - USA  
OIL SPILL CONTINGENCY PLANNING & MANAGEMENT  
JAKARTA JANUARY 31 - FEBRUARI 2, 1995

Seminar Indonesia - USA on oil spill response was held in Jakarta, from 31st January till 2nd february 1995. During this 3 day conference, there were speaker from Indonesia and USA as follow:

Speakers from Indonesia side:

Prof. M.T. Zen,	Deputy chairman for Natural Resources development, BPPT
Mr. P. L. Croutrier,	Deputy II for Development, BAPEDAL
Mr. Soentoro,	Directorate General of Sea Communication
Ir. T. Husin Yoesoef,	Ka dinas Pelabuhan, Pertamina
Dr.Ir.Indroyono Soesilo,MSc,	Director, Directorate of Technology for Natural Resources Inventory, BPPT

Speakers from USA side :

Mr. Sidney smith,	Science counselor, US Embassy
Mr. Rishi Tyagi,	Minerals Management Services (MMS)
Mr. Joseph Mullin,	Minerals Management Services (MMS)
Mr. James Staves,	Environmental Protection Agency (EPA)
Dr. John Hill,	Houston Advance Research Center
Dr. Jerry Galt,	National Oceanic and Atmospheric Administration (NOAA)
<del>Terry Taylor,</del> BOB DA LTON	Global Industries Corporation
Neil Challis,	National Response Corporation
Dan Conaster,	JBF Scientific Company
Steve Blackburn,	MARCO
Bill Gorham,	ENSR
Atle Nordvik,	Marine Spill Response Corporation
Capt Philip Wieczynski,	U.S. Coast Guard

This 3 day conference co sponsored by the Indonesian Agency for the Assessment and Application of Technology. It was attended by 250 participant from Indonesia and USA side including BPPT, Directorate General of Sea Transportation, PERTAMINA, Indonesia private sector organizations, US Minerals Management Services (MMS), US Environmental Protection Agency (EPA), US Coast Guard (USCG), National Oceanic and Atmospheric Administration (NOAA) and US private sector organizations.

The result of each working group was accepted as the result of the conference as follow :

WORKING GROUP A  
LAWS AND REGULATIONS PERTAINING TO OIL SPILL  
RESPONSE/CONTINGENCY PLANNING

Chairman : Rishi Tyagi, MMS, US  
Co chairman: Capt Henky Lumentah

**RECOMMENDATION**

1. National Contingency Plan and Emergency Response System draft decrees need to be signed & approved a.s.a.p.
2. Implementing Action Plan should be developed immediately thereafter with input from all stakeholders ( central, provincial & local) agencies, regulated industry, publicorganisations others).Action plan should describe more detailed procedures, requirement and guidelines.Action plan should have well-defined roles for all levels (local, provincial, central). Procedures for resolving as many issues as possible to be in advance, should be established.
3. Agency representatives with lead responsibility in oil spill response should have authority to act and make commitments on behalf of their respective agencies.
4. Letter should recognise all agencies that participate in the workshop and in the development of the recommendation.
5. U.S. and RI should cooperate the needed on all aspect of the implementation of regulation procedures aspects of NCP under the existing US-RI agreement on cooperation in Science and Technology.
6. Mutual Site visit should be encouraged
  - A comparative study of Oil Spill Response Requirements in US, Indonesia & a few other countries, may be beneficial in the development of improved Oil Spill Contingency Planning.
  - Table Top Simulation drill for Oil Spill disaster scenario should be conducted in Indonesia.
  - Workshop on National Contingency planning would be beneficial.
  - Workshop on The Oil Spill Liability Trust Fund (establishment, utilization, replenishment) would be beneficial.

U.S CONTACT

Agency	Name	Phone	Fax
US Coast Guard	CDR Tom Reilly	202-267-4085	202-267-4085
US Coast Guard	CDR Phillipp Wielzynsky	671-339-2001	671-339-2004
NOAA	Dr. Jeane Snyder	202-267-4085	
MMS	Ms Mary Ann Milosovich	703-787-1231	703-787-1284
MMS	Mr Rishi Tyagi	805-389-7775	805-389-7784
EPA	Mr Jim Staves	214-665-2277	214-665-7447

INDONESIA CONTACT

1. DIRECTORATE GENERAL OF SEA COMMUNICATION

-SYAMSUL BACHRI, DIRECTOR FOR SEA AND COAST GUARD

PHONE: 3451364

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-CAPT. HENKY.M.J.LUMENTAH

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2. ENVIROMEN IMPACT MANAGEMENT AGENCY (BAPEDAL)

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3. NAVY

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4. PERTAMINA (NATIONAL OIL DAN GAS COMPANY)

CAPT MAX MALORINGAN

HEAD OF CORPORATE CENTER FOR ENVIROMENT PROTECTION

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5. AGENCY FOR THE ASSESSMENT AND APPLICATION OF TECHNOLOGY (BPPT)

INDROYONO SOESILO

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## WORKING GROUP B:

### OIL SPILL RESPONSE TECHNIQUES, EQUIPMENT, MATERIAL AND PROCESSES

Chairman : Dr. Indroyono Soesilo (BPPT)

Co-Chairman : Mr. Joseph Mullin (MMS)

Working Group B decided that the Indonesia-US Cooperation in Oil Spill Response may be conducted in the following activities:

1. **STRENGTHENING OIL SPILL RESPONSE NOTIFICATION CAPABILITIES FOR INDONESIA.**
  - ◆ Prompt Reporting of oil spills (radio, phone, fax)
  - ◆ Communication's During Spill Response.
2. **STRENGTHENING OIL SPILL RESPONSE CAPABILITIES FOR INDONESIA:**
  - ◆ Information on the amounts and types of oils shipped through Indonesia.
  - ◆ Tanker routes through Indonesia.
  - ◆ Develop Oil Properties database on physical/chemical properties of crude oils and petroleum products.
  - ◆ Dynamic modelling of oil spills to predict movement of oil and to mount proper spill response.
  - ◆ Develop a National Geographic Information System to indicate Sensitive enviromental areas that must be protected.
  - ◆ Integrate all types of oil spill response techniques to combat oil spills (mechanical equipment, boom, skimmers, dispersants, in-situ burning, no removal option to protect sensitive areas).
3. **DEVELOP THE NATIONAL RESPONSE EQUIPMENT AND TRAINING CENTER:**
  - ◆ Stockpiles of equipment (boom, skimmers, dispersants, etc.)
  - ◆ Specialized training on equipment operation, oil spill management and logistics.
4. **TRAINING AND DEMONSTRATION ACTIVITIES:**
  - ◆ Simulated Oil Spill Response Exercises (initated by table top exercise).
  - ◆ Simulated Oil Spill Drills.
  - ◆ Health and safety training for responders.
  - ◆ Oil Spill Equipment Demonstrations.
  - ◆ The training & demo should be conducted in three level:
    - a) Operator Level.
    - b) On-Site Commander Level
    - c) Expert Level.

THE INDONESIA - US COOPERATIONS IN OIL SPILL RESPONNS MAY BE APPROACH THROUGH SIX PROJECTS, AS FOLLOW:

- A) The On Going Marine Resources Evaluation and Planning Program
- B) The Study Relating on the Marine Disaster and Marine Pollution (Blue Book, 94-95)
- C) Upgrading Oil Spill Combating Equipment Capabilities in Indonesia (Blue Book, 94-95)

D) Procurement of Marine Disaster Prevention Ship for Fire Fighting, Oil Spill Response, Law Enforcement, Search & Rescue (Blue Book, 94-95).

E) Sensitivity Map Development Program in the Northern Coast of Java, Southern Coast of Java and the Eastern Coast of Sumatra (PERTAMINA Project).

F) The Development of Crisis Management Center At PERTAMINA.

In order to do the follow-on progress, the Indonesian delegation elects The Directorate General of Sea Communication, Directorate Sea & Coast Guard as the contact person of this activity.

The US delegation elects the US Mineral Management Services as the Contacting Organizations.

Indonesia will do the follow-on discussion on the above matter on the coming Oil Spill Conference in Long Beach California, February 1995. PERTAMINA Representative will present in this Conference.

U.S. CONTACT

MS. MARY ANN MILOSAVICH  
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## WORKING GROUP C

### Conclusions and Recommendations from Session C : Application Oil Spill Response Seminar.

Application of Oil spill Response technology should be directed toward supporting the implementation of Oil Spill Contingency Plan. The application is recommended to be initially implemented at a prototype scale before a full scale implementation is conducted. Through the development of the prototype, important implementation lessons can be learned and better final plan can be produced.

The specific topics recommended for the application include :

1. Baseline sensitive area mapping which can be related to the existing Indonesian project (e.g., MREP, Pertamina's resource mapping, DGSC Marine spill projects).
2. Remote sensing and trajectory analysis, especially to anticipate catastrophic spill.
3. Oil spill response capability enhancement with various alternative prototype development including :
  - the use of computer simulated exercise to test oil spill cleanup response capability considering time of response, logistic mobilization, etc. assuming cleanup contractors are used.
  - training of Indonesian personnel to form Indonesia cleanup crews.
  - development of oil spill response capability through long-term exercise.
4. Develop a network of contacts (database) which include : agencies, experts, field personnel, industries and environmental companies related to oil spill response.
5. Explore the possibility of site visit and comparative studies involving both policy makers, technical personnel, and oil industries to cooperatively learn how oil spill contingency plan is formulated and implemented.
6. Explore the possibility of financing research and development of oil spill response capability using trust fund, revolving fund or other funding arrangement which is directly tied to commodity (i.e., oil income).

The contact person for application are:

For Indonesia:

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RS & GIS Laboratoy  
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For the USA:

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\* FEBRUARY 1 :

Time : 10.00 - 12.00 :

Working group at session A, session B and session C

Three concurrent session of panel discussion and audience participation to assess the current status of and to make recommendations for follow up actions on the following topics :

**Session A** : Laws and Regulations Pertaining to Oil Spill Response / Contingency Planning  
( BAPEDAL, EPA , MMS, Directorate General of Sea Transportation, PERTAMINA, USCG, BPPT, NOAA, HARC and others )

**Session B** : Oil Spill Response Techniques, Equipment, Material and Processes  
( Directorate General of Sea Transportation, PERTAMINA, MMS, USCG, BAPEDAL, EPA, BPPT, NOAA, HARC and others)

**Session C** : Application, Remote Sensing, Trajectory Analysis  
( BPPT, NOAA, HARC, Directorate General of Sea Transportation, PERTAMINA, MMS, USCG, BAPEDAL, EPA, and others )

Time : 12.00 - 13.00 :

Lunch

Time : 13.00 - 15.00 :

Continued Sessions : A, B, C

Time : 15.00 - 15.30 :

Break

Time : 15.30 - 16.15 :

Plenary Session

\* FEBRUARY 2 :

Time : 10.00 - 12.00

General Session :

- ♦ Presentation of Findings and Recommendations, by :
  - \* BAPEDAL
  - \* PERTAMINA
  - \* Sea Communication
  - \* BPP Teknologi
  - \* Dept. of Mine and Energy
  
- ♦ Question / Answer session

**APPENDIX C**  
**BUSINESS CARDS OF PERSONS CONTACTED**



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Ka. Sub. Din. Pengembangan  
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**APPENDIX D**  
**CURRICULUM VITAE**

# Steven R. Blackburn Profile

## POSITION:

MARCO Pollution Control Sales Manager

## EDUCATION:

BS Mechanical Engineering, University of Washington, Seattle  
Executive MBA University of Washington, Seattle

## EXPERIENCE:

MARCO Pollution Control 1993-present, in addition to 1976-1984  
Extensive worldwide application engineering and project management experience.  
MARCO Technical On-Site Representative for numerous major and minor oil spills  
Small boat (sail & power) enthusiast

## AFFILIATIONS:

Spill Control Association Member  
World Trade Club Member

## CURRICULUM VITAE

ROBERT J. DALTON

Robert J. Dalton is executive Vice President of Global Industries Corporation, an environmental engineering, and infrastructure construction corporation headquartered in Singapore. The corporation is involved in major programs worldwide. Formally, Mr. Dalton was the President of a privately owned consulting firm specializing in assisting American corporations in gaining access to the markets in Southeast Asia. He served as Co-Director of the Vietnam Free-Market Education Project, a non-profit program to assist the U.S. and Vietnamese governments during the transition to normalization of economic and diplomatic relations. Mr. Dalton also served as Executive Director of the Prosthetic Research Foundation. The Foundation established a modern prosthetic clinic in Hanoi, Vietnam in 1989. The clinic has subsequently been supported by the United States Government. Mr. Dalton completed 32 years of active service in the United States Marine Corps. He served combat duty in both Korea and Vietnam, and he was trained to be a fluent Vietnamese language speaker. He holds a B.A. degree in Political Science from the University of Maryland, and a Masters Degree in Human Resources Management from Pepperdine University. Mr. Dalton has taught college level courses at Foreign and American Universities.

## WILLIAM T. GORHAM, Ph.D.

### PROFESSIONAL HISTORY

ENSR Consulting and Engineering  
California Lutheran University  
University of the Virgin Islands

### EDUCATION

Ph.D. (Biological Sciences) University of Southern California  
M.S. (Marine Studies) University of Delaware  
B.S. (Biological Sciences) Stanford University

### PROFESSIONAL REGISTRATIONS & AFFILIATIONS

American Society of Zoologists  
Association of Environmental Professionals  
American Association of Underwater Scientists  
National Association of Underwater Instructors

### TECHNICAL SPECIALTIES

Dr. Gorham has over 16 years of experience in:

- Oil Spill Contingency Planning
- EIR/EIS Preparation
- Environmental Assessments and Permitting
- Ecological Physiology and Risk Assessment

### REPRESENTATIVE PROJECT EXPERIENCE

#### Oil Spill Contingency Plans

- Clean Seas - Regional Resource Manual. Project manager for preparation of Regional Resource Manual for the four oil spill cooperatives in California. Plan was used to supplement cooperative member OSCP's for conformance with state OSCP regulations.
- Mobil Oil Corporation - OSCP Ventura Pipeline. Project manager for preparation of an OSCP for a crude-oil-gathering pipeline in Ventura County, California. Plan was in conformance with state and local regulations.
- ARCO - OSCP, Four Corners Pipeline. Project manager for preparation of an OSCP for four marine terminal and storage facilities in Long Beach Harbor. Plan was in conformance with state and federal regulations.

- Mobil Oil Corporation/West Coast Pipe Lines, Los Angeles - OSCP for Pipeline Systems. Project manager for preparation of GSCPs for marine terminal/storage facility in Los Angeles Harbor as well as OSCP for pipeline systems in Southern and Central California for compliance with both OPA90 and California SB 2040.
- Mobil Oil Corporation - OSCP for Marine Terminal, Los Angeles. Project manager for preparation of an OSCP for marine terminal/storage facility in Los Angeles Harbor.
- ARCO, Four Corners Pipeline - OSCP. Project manager for preparation of an OSCP for three marine terminal and storage facilities in Long Beach Harbor, four inland terminals, and associated pipeline systems in Southern California for compliance with both OPA90 and California SB 2040.
- British Petroleum Marine North America - OSCP. Project manager for preparation of an OSCP for a marine terminal and storage facilities in Los Angeles Harbor for compliance with both OPA90 and SB 2040.
- Mobil Oil Corporation/West Coast Pipe Lines - OSCP. Project manager for the preparation of an OSCP for Mobil's M-70 pipeline replacement running from Lebec, Kern County to Torrance, Los Angeles County.

#### Environmental Assessments

- ABB, Yabucoa, Puerto Rico - NPDES. Manager for ecological assessment of marine biological communities.
- Cogentrix, Inc., Cogeneration Facility in Mayaguez, Puerto Rico - NPDES Permit and EIS. Manager for preparation of biological assessment (BA) for four species of marine turtles and one species of manatee.
- U.S. Navy CLEAN, Guam - RI/FS Risk Assessment, Abandoned Landfill. Manager for the preparation of ecological and human health risk assessment for an abandoned landfill.
- Kerr McGee - Boiler Ash Risk Assessment. Task manager for ecological and human health risk assessment for closure of a boiler ash pile located in the California desert.
- U.S. Navy CLEAN, Guam - RI/FS Risk Assessment, Fuel Burning Pond. Task manager for the preparation of ecological and human health risk assessment for fuel burning pond.
- Molycorp Mine - Qualitative Risk Assessment. Prepared a qualitative risk assessment on the human health hazard posed by slightly enriched soils to be stored near a school.
- Mobil Oil Corporation, West Coast Pipe Lines - Pipeline Replacement Project. Project manager for providing a wide diversity of permitting support services for construction of crude oil pipeline.

Date of Preparation: 20 April 1994

**Atle B. Nordvik**



## PERSONAL

Citizenship: Norway  
Marital Status: Married  
Children: One Daughter, 18 years old

## EDUCATION

1970-1972: Bergen Technical College  
Education Equivalent to a Bachelors Degree in Naval Architecture/Engineering

1963-1967: Royal Norwegian Naval Academy  
Graduated and Commissioned as Naval Officer in 1967

## ADDITIONAL COURSES

### Royal Norwegian Navy

- Course in Naval Operations and Tactics, 9 months
- Submarine Qualifying course for Commanding Officers, 9 months
- Submarine Officer Qualifying Course, 3 months
- Scuba Diving Course
- Civil Maritime VHF Qualifying Course for Operation of Vessel Communications Center

### MSRC

- HAZWOPER Training Course

## JOB EXPERIENCE

1991-present: Director Applied Engineering, Marine Spill Response Corporation (MSRC).  
For details, see Attachment I.

1986-1991: Manager Planning and Development, Norwegian Clean Seas Association for Operating Companies (NOFO). For details, see Attachment II and III.

1978-1986: Head of NOFO Secretariat and Manager Technical Maintenance and Training, NOFO. For details, see Attachment II and III.

1975-1978: Lieutenant Commander, Royal Norwegian Navy

- Served on Frigates
- First Lieutenant and Head of Personnel and Administration
- Antisubmarine Warfare Control Officer
- Technical and Tactical Operations of the Antisubmarine Warfare Control Equipment and Strategies.
- Replenishment at sea operations, Senior Watch Officer on the bridge.

1974-1975: Royal Norwegian Navy  
Submarine Qualifying Course for Commanding Officers, an operational and tactical course for commanding officers.

- Commanding Officer, submarine
- Submarine warfare operations, strategies and tactics

1972-1974: Royal Norwegian Navy -- Submarine Squadron No. 1  
Served on the Training Submarine and at the Submarine Training Center.

- Education of Submarine Officers, taught first lieutenants and other officers diving and attack procedures, technical systems, and routines on conventional submarines. The course included theory and hands-on training in operation of all submarine systems.
- Senior Watch Officer on the bridge.

1971-1971: Royal Norwegian Navy  
Commanding Officer of a Landing Craft

1967-1970: Royal Norwegian Navy -- Submarine Squadron No. 1  
Served on a Submarine Tender and on Submarines.

- Head of Departments in Navigation, Communication, Administration, Weapons, Operations, and Supply Services.
- Senior Watch Officer on the bridge.

**APPENDIX E**  
**PHOTOGRAPHS**



SEMINAR  
INDONESIA - U S A  
OIL SPILL CONTINGENCY PLANNING & MANAGEMENT  
JL. M.H. THAMRIN 8, JAKARTA JANUARY 31 - FEBRUARY 2, 1995



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INDONESIA - U S A  
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