

Petroleum Industry's Challenge and Future Prospect to Oil Spills

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1. Introduction

I would like to express my gratitude for precious lessons and know-how based on a variety of experiences of the specialists and the persons in charge of disposition of oil pollution, gathering from Europe, Oceania, Middle East and Asia, in an international symposium on the issue of oil pollution, held for the first time by the Petroleum Association of Japan (PAJ), last March.

In addition, on that occasion, a number of significant suggestions were presented by the lecturers who attended last year, on the issues to be considered as themes of future symposium, as follows:

- 1) Responsible party of paying for cleanup expenses. Structure of the basis of an international compensation scheme.
- 2) Development of cooperative regional arrangements including training and response for oil spill, based on the effective OPRC Convention.
- 3) Consideration of a trans-border mobilization of equipment and expertise.
- 4) Establishment of cooperative relationship among governments and oil and shipping industries through joint trainings.
- 5) Coastline sensitivity mapping for practical and effective response to oil pollution.

Each of the theme above is independently significant enough to be a symposium issue, and they mostly correspond to the concerns given by the attendants who answered the questionnaire survey done on the occasion of the last year's symposium.

Today, I, keeping the above in mind, would like to touch upon the achievements of the Petroleum Association of Japan during the past year and the Association's future prospect. However, I have to say, with considerable recognition of the present situation concerned, that few of those indicated and suggested last year have been realized, to be needed consistent efforts.

2. Major Oil Spill Response (OSR) Programme

The Major Oil Spill Response Programme, being implemented from 1990 by PAJ, and subsidized by the Ministry of International Trade and Industry (MITI), consists of two activities: one is the stockpiling and lending free of charge of oil spill response equipment at the request of persons concerned to disasters abroad as well as domestic, and the other is the research and development (R&D) related to measures against oil spills and responding technology.

(1) Stockpile Bases of OSR Equipment

PAJ currently has 6 stockpile bases in Japan and 4 overseas ones as the stockpile bases to store oil pollution preventive equipment and to lend the equipment the parties concerned. In comparison with the status as of last March, PAJ has added two, one in Okinawa in Japan and the other in Abu Dhabi for overseas. Moreover, an additional base will be established in Indonesia at the end of March 1996. With the fact that the number of overseas bases should be five at the end of this March, we will have a further improved system of bases for major points on the oil route to Japan.

In terms of the stockpile equipment, "Beach Cleaners" (a vacuum cleaner) will be introduced also to the overseas bases, and the disk type of oil collection equipment will be introduced to the domestic bases in addition to the conventional dam type, both scheduled to be the end of March.

As of the end of March, the stockpile status of equipment in the 11 bases, domestic and overseas, is as follows in the appendix:

(2) Lending of OSR Equipment

PAJ lends the equipment in the event of a major oil spill to the parties concerned including government agencies, at the request of such parties in accordance with the procedures of Agreement for the Lending of Oil Spill Response Equipment.

Lending of the equipment is specifically implemented to provide additional equipment to support a primary response operation through supplying such additional equipment, as a secondary mobilization, upon request when in a major oil spill disaster in which only the equipment owned by companies is not enough for responding the expansion of damage.

The basic lending conditions are:

- * Use of equipment is free of charge
- * The user shall make necessary arrangements for transportation from/to the base,

deployment of the equipment and the like related to the lending, and bear all the expenses of such arrangements.

* After the use of equipment, the user shall clean, check and repair the equipment at the user's expenses, confirm the equipment be in good order, and then return the equipment to the base.

* In principle, the equipment shall be returned within three months after the release.

Under these conditions, PAJ, for the first time for overseas, lent the equipment to Korea from Base No. 2 in Japan at the request of British P&I Club, last August. A detailed explanation for this response process will be delivered by Mr. Joe Nicols of International Tanker Owners Pollution Federation, later. I understand that, through this lending, PAJ's system has proved to be effectively functional when in an emergency.

(3)Support and Training to Borrower

In this programme, the borrower basically makes all arrangements such as transportation and use of equipment. PAJ, as supporter to the borrower in the event of a disaster, designates maintenance contractors of the equipment in the domestic bases, as cooperative companies. PAJ uses to introduce, using its good offices, these companies, profoundly familiar with transportation of the equipment and the operation on site, when lending the equipment at the request of the borrower. Actually, in the lending to Korea, the cooperative company implemented the shipment from the base to the ship to Korea at the request of the borrower.

However, these domestic cooperative companies have all the way to start with the acquisition of passport/visa at present when responding to the request of the owner, to implement a trans-border lending. In this respect also, PAJ is earnestly searching for any possibility of swift response.

In the domestic bases, so as that the borrower itself could use the equipment for its own oil spill response operation, PAJ, in cooperation with PAJ 011 Spill Cooperative Organization (POSCO) (a cooperative organization constituted of 53 companies in total, including the member companies of PAJ and other related companies), has been holding training courses in each domestic base in turn for the parties concerned of prospective borrower companies to become proficient in the operation of the equipment.

PAJ thinks it will expand such supporting measures to overseas bases, too.

(4) Research and Development Plan

For the purpose, when occurring a major oil spill, of responding properly to the change of the properties of oil after the spill or the change in the weather and maritime condition, to prevent effectively the expansion of such disaster, it is indispensable, apart from obtaining the latest scientific knowledge on the behaviour, the situational change from time to time and responding technologies after the spill, to enhance some research and development in the oil spill response area, eventually utilizing the results in the establishment of the optimum response system. With this intention in mind, PAJ has conducted an experiment on the Change of the properties of oil in accordance with time elapse from last year on. In addition, PAJ has developed an open-sea model surrounding Japan for the Simulation model on diffusion-drift of spilt oils, other than the investigations on the Self-cleanup mechanism of ocean for spilt oils and the Possibility of safety navigation support system for tankers. Furthermore, PAJ has newly started to investigate the necessity of the Emergency measure support vehicle.

3. Future Issues

PAJ will steadily continue the fulfilment of oil response equipment and the investigations and researches that support it, both being the basis of the Major Oil Spill Response Programme.

However, in terms of a system to utilize PAJ's equipment, arranged as shown above, it is proposed for each member country of OPRC Convention to make the treaty effective to prepare contingency plans, other than implementing training for a major oil spill disaster, promoting an international cooperation scheme and concluding substantial cooperation treaties among the member countries. For IMO, this organization is expected to play a new role in technological cooperation and provision of usual information. With a trend of increased attention toward the establishment of an international compensation system for oil response expenses, in relation to the above mentioned, since PAJ believes that, without any dynamism to keep exchanging opinions and to try to create a better system, the whole system surrounding oil response could remain insufficient and improper, it must be essential for PAJ and the related bodies to continue every kind of ceaseless efforts in this respect.

4. Conclusions

In this symposium, based on the above referred concept, such themes as the becoming effective of OPRC Convention, expected role for IMO and future role of IOPC FUND, all being concerned with a new international framework, were discussed. Also, some interesting reports from relevant field are presented. They are:

- 1) Review on the response to the SEA PRINCE incident in Korea, where PAJ for the first time lent the equipment across the sea.
- 2) Problems accompanied with trans-border mobilization of the equipment on which EARL has accumulated through their business operations and its solutions.
- 3) Know-how extracted from experiences of oil response training, being implemented in preparation for an emergencies, and brush up of capability of human resources, mainly among national petroleum companies in the region.

PAJ thinks that, through exchanging information, an effective and influential international cooperation for a major oil spill disaster would be improved, though gradually, and this would eventually lead to further better utilization of PAJ's oil response stockpile equipment bases.

Furthermore, we will have a briefing of the National Contingency Plan, to be the basis of Japan's national response which reflected to new framework, by a responsible official of the Maritime Safety Agency.

As for PAJ's investigation and research programmes, an interim report of the Research on self-cleanup mechanism of ocean and an introductory demonstration of a model for a closed sea area of the Spill-drift prediction model of spilt oils are scheduled to be presented.

Holding a joint closed session with the parties concerned in charge management and the maintenance contractors of PAJ's 10 overseas and domestic stockpile equipment bases, PAJ would like to exchange frank and candid opinions in relation to troubles caused along with maintenance and management of the equipment and their preventive measures, know-how of operating the equipment, safety measures and logistics when in emergency mobilization, and training and man-power exchange, to acquire useful knowledge in preparation for emergency situations. The results obtained in the closed session will be compiled later.

Finally, PAJ, as organizer of this symposium, recognizes this occasion has provided a opportunity of positive discussions among the lecturers, the participants and the base-related persons. It will be an unexpected delight for PAJ to contribute, even though insufficient, to the creation of a new situation that through this symposium the attendants could enhance mutual understanding of each other and construct a useful and effective cooperative system to prepare for emergencies.

If each one of you judges this attempt by PAJ has been successful, PAJ then also intends to make a contribution in creating in near future occasions of thorough discussions by experts on every important and substantial theme as described in the beginning, to search for some proper directions.

Finally, and again I would like to expect active exchange of opinions by all of you who have participated in this symposium on oil pollution.

(Equipment Stockpile Bases)

As of December 1995

	Domestic					
Base Name	Tokyo Bay	Seto Inland Bay	Ise Bay	Sea of Japan	Hokkaido	Okinawa
Location	Chiba	Mizushima	Yokkaichi	Niigata	Muroran	Ilenza
Opening	Nov. '91	Sep. '92	Mar. '93	Sep. '93	Oct. '94	Mar. '95
Equipment						
·Solid Boom	8,000m	4,000m	2,080m	1,920m	1,920m	2,080m
·Inflatable Boom	1,000m	1,000m	1,000m	1,000m	1,000m	1,000m
·Oil Skimmer (Desmi 250)	2+(1)	2+(1)	2+(1)	2+(1)	2+(1)	2+(1)
·Oil Skimmer (GT-185)	2	2	2	2	2	2
·Oil Skimmer (Komara 12K)	(4)	(4)	(4)	(4)	(4)	(4)
·Beach Cleaner	2+(2)	2+(2)	2+(2)	2+(2)	2+(2)	2+(2)
·Portable Tank	8+(8)	8+(8)	8+(8)	8+(8)	8+(8)	8+(8)
·Portable Lighting System	2	2	2	2	2	2

	Overseas				
Base Name	Singapore	Saudi Arabia	Malaysia	Abu Dhabi	(Indonesia)
Location	Jurong	Al-Khafji	Port Klang	Abu Dhabi	(Jakarta)
Opening	Mar. '93	Mar. '94	Mar. '94	Mar. '95	(Mar. '96)
Equipment					
·Inflatable Boom	1,000m	1,000m	1,000m	1,000m	(1,000m)
·Oil Skimmer (Desmi 250)	4			4	
·Oil Skimmer (GT-185)		4	4		(4)
·Beach Cleaner	(2)	(2)	(2)	(2)	(2)
·Portable Tank	8	8	8	8	(8)

※ () is scheduled by the end of March 1996