

Challenge to Major Oil Spills by the Oil Industry in Japan

by

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1. Introduction

Petroleum Association of Japan (PAJ) is a non-profit making and non-governmental trade association comprising of 25 companies engaged in refining and/or marketing of oil in Japan, established in November 1955 to promote and encourage the sound development of the Japanese petroleum industry.

Response to major oil spills is PAJ's one of the most important activities to be challenged from the view-point of environmental protection.

Oil spill is one of the most critical issues for the petroleum industry. Each individual refineries or oil terminals in Japan has already owned enough capability to respond to oil spill incidents in usual operations, in accordance with the government regulations, mainly The Marine Pollution and Disaster Prevention Law and The Petroleum Complex Disaster Prevention Law.

Furthermore, Petroleum Association of Japan and established "PAJ Oil Spill Co-operative" in January 1973 annexed to PAJ as a voluntary mutual aid organization based on the lessons learnt from the JURIANA incident in November 1971.

However, oil spill incident in Alaska in March 1989 triggered international concern over ocean environment conservation, especially necessity of strengthening oil spill response capability. Based on such international development, the Ministry of International Trade and Industry (MITI) of Japan arranged a government subsidy for "Major Oil Spill Response Programme" in fiscal year of 1990, which PAJ began to implement from 1991.

2. Major Oil Spill Response Programme

The programme consists of two areas of activities, one is the stockpiling and lending of oil spill response equipment, and another is the research and development (R&D) related to oil spill and responding techniques.

Through the appropriate implementation of the programme, PAJ wishes to contribute not only to the promotion of oil spill response capability, but also to global marine environment conservation, as well as to the stable supply of oil to Japan.

Stockpile of OSR equipment

PAJ builds up and maintains the stockpile of oil spill response equipment including selection and purchase of it. Maintenance contractors implement appropriate and periodical check up of the devices. Thus, by the end of February 1995, last month, 8 stockpile bases were completed and ready for use.

The other one will be added before the end of this month in Abu Dhabi as the 9th base and will be followed by 10th base in Okinawa, the southern island of Japan.

5 bases of 8 are in Japan and located in the premises of refineries faced major waters. PAJ entrusts its member companies, which bases are located, to supervisors, with storage of the equipment and co-ordination of its mobilization in case of incidents. Remaining 3 bases are in overseas including Singapore, Malaysia and Saudi Arabia along with the "Oil Route" or the tanker route from the Middle East oil producing countries to Japan.

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 "Agreement for the Lending of Oil Spill Response Equipment" provided by PAJ. PAJ also provides the Special Contract of the above Agreement for the member companies and for others including government agencies, which makes simplify the needed procedures for lending.

PAJ's activity is to support the primary response operation through supplying additional equipment, as a secondary mobilization, upon request.

The basic lending conditions are:

- Use of equipment is free of charge
- The user shall make the necessary arrangements for transportation from/to the base, deployment of the equipment and the like related to the lending, and bear all the expense of such arrangements
- After the use of equipment, the user shall clean, check and repair the equipment at his expense, 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 release

Contingency Support and Training

PAJ has been coordinating in Japan the system where the maintenance contractors of PAJ could undertake the transportation and deployment of the equipment by exchanging contract with users. In overseas, PAJ is looking for proper contractors to apply such arrangements.

In order to become proficient in operation of the equipment, or to be familiar with the equipment, PAJ has coordinated various kinds of oil spill response exercise, including joint exercises with Maritime Safety Agency of Japan. In this context, PAJ, with PAJ Oil Spill Co-operative, opens periodical training courses of oil spill response to the staffs of member companies from the March of 1995.

Research and Development Plan

When a major oil spill incident occurs, it is essential to respond correctly to the change of situation in order to prevent effectively the disaster from expansion of the spill. For that purpose, it is indispensable not only to be acquainted with time to time information concerning the behavior of spilt oil, the changes in its properties with the passage of time, and the technology to cope with the disaster but also to establish a system for effective response to oil pollution as a result of the investigation of the optimum response system.

PAJ's R&D is going on:

- Diffusion-drift model of spilt oils
- Changes of properties of spilt oils by the weathering systems
- Self-cleanup mechanism of ocean for spilt oil
- Others

3. Target to be achieved

The Major Oil Spill Response Programme has thus, as mentioned above, implemented and installed OSR equipment stockpiles on the important points along with tanker route from Mid-East to Japan, and got some appreciation from inside and outside of Japan.

Today, we have the honour to meet the authorities and experts of the world in the field of oil spill response, and on this opportunity of gathering, PAJ wishes to indicate some targets to be achieved progressively from now on.

1) Expansion of OSR equipment and substantial trainings

PAJ will make effort to install more equipment stockpile than already disposed. We will continue the study and discussion needed for deciding the expansion of the variety of equipment, and also the increase of stockpile base, and thus make them more convenient and reliable for users.

Besides the expansion, we will make efforts to hold frequent and periodical trainings for needed personnel to avoid the equipment becomes pearls casted before swine.

2) Efforts for developing new (and improving present) technologies on oil spill response

Thanks to MITI's support, we will continue efforts to investigate the mechanism of weathering of spilt oils, and this will derive two aspects of technology development. One is to investigate the changes of properties of spilt oil, which will help to apply appropriate recovery method and devices. The other is to investigate the self-cleanup mechanism of ocean for spilt oil, which will possibly be an effective supplement for mechanical and chemical treatment process.

3) Promotion and encouragement of international cooperation

Our basis to hold this symposium is to be more acquainted with our activities, and makes world most advanced wisdom common properties of all who in charge of conserving environment including response to oil spills.

For this purpose, we should recognize and become familiar with each other through the exchange of information which will pave the way for most effective and powerful cooperation including compatible systems of oil spill response.

PAJ will contact with IPIECA (International Petroleum Industry Environmental Conservation Association) and other organizations to promote the cooperation in this area, especially to activate the joint education/training programme using PAJ's equipment of the stockpile sites which occupy key points of tanker traffic in the asian region.

Thank you for listening and hoping a fruitful symposium.