



INCIDENTS INVOLVING THE 1992 FUND

INCIDENT IN THE KINGDOM OF BAHRAIN

Note by the Director

Summary:

The north coast of the Kingdom of Bahrain was polluted by crude oil in March 2003. Investigations by the Bahrain authorities and the Marine Emergency Mutual Aid Centre (MEMAC) indicated that the spill occurred on or about the 8 March 2003 in the vicinity of the anchorage for the Al Ju'aymah oil terminal, Saudi Arabia. However, no vessel was identified as the source. Analyses of the polluting oil indicated that it was probably Iraq (Basrah) crude and that due to its relatively un-weathered condition it could not have been spilled in Iraqi waters. On the basis of the information provided by the Bahrain authorities and independent analyses carried out by a laboratory in the United Kingdom, the Director is of the view that it is highly likely that the polluting oil was Iraq crude. For these reasons he is satisfied that the oil was spilled from a 'ship' as defined in the 1992 Civil Liability Convention. The Director considers therefore that claims for pollution damage arising from this incident are covered by the 1992 Fund Convention.

Claims in respect of cost of clean-up operations have been submitted to the 1992 Fund by various government agencies and the Bahrain Petroleum Company. Claims have also been submitted on behalf of fishermen in respect of property damage and loss of income from fishing.

Action to be taken:

Decide whether claims for compensation arising from the incident are covered by the 1992 Conventions, and if so, whether to authorise the Director to settle such claims.

1 The incident

- 1.1 On 15 March 2003 the Air Wing of the Bahrain Ministry of Interior reported an oil slick 20 miles off the north coast of Bahrain. On 17 March the oil started stranding on shorelines on the north coast of the Kingdom of Bahrain and over a period of three days further oil stranding occurred on the east and west coasts of Muharraq Island. Some oil entered the port of Mina Sulman, and a fishing harbour was impacted causing damage to fishing vessels and gear. Oil approached the seawater intake of the Sitra power station and desalination plant. Some 18 kilometres of shoreline were polluted with an estimated 100 tonnes of oil. Some oil reportedly affected the coastline of the Kingdom of Saudi Arabia in the vicinity of the causeway linking Bahrain with the mainland.

- 1.2 The Bahrain Coast Guard undertook clean-up operations at sea between 15 and 24 March 2003. On 22 March the Presidency of Meteorology and Environment of Saudi Arabia provided the Bahrain authorities with some 2 000 metres of oil containment boom and a skimming vessel. This equipment was returned to Saudi Arabia on 28 March.
- 1.3 The Ministry of Electricity and Water deployed booms in the vicinity of the intake of the Sitra power station and desalination plant and also undertook shoreline clean-up operations to prevent the oil contaminating the facility's cooling system and desalination feedstock.
- 1.4 A number of government agencies together with the Bahrain Petroleum Company (BAPCO) undertook shoreline clean-up operations. These operations were commenced on 19 March and were terminated on 18 April 2003.

2 Investigations into the source of the pollution

Chemical analyses

- 2.1 The Bahrain authorities collected pollution samples on 20 and 24 March 2003 and sent them to the laboratories of BAPCO in Bahrain and Saudi Aramco in Saudi Arabia for chemical analysis. MEMAC also obtained pollution samples and sent them to the 1992 Fund for analysis.
- 2.2 The BAPCO analyses were inconclusive, although it was reported that the sulphur content of the oil closely matched Iraq (Basrah) crude. The Saudi Aramco laboratory concluded that the oil was Iraq crude.
- 2.3 The Director submitted samples sent to the 1992 Fund to ERT (Scotland) Ltd, a laboratory specialising in the analysis and fingerprinting of petroleum oil. That laboratory concluded, in the absence of any reference oils for comparison, based on its experience, that the oil could have originated from Saudi Arabia, Kuwait or southern Iraq.
- 2.4 In February 2004 MEMAC obtained a sample of Iraq (Basrah) crude oil from an export tank of the Al-Baker oil terminal in Iraq and submitted the sample to the 1992 Fund. This sample was subsequently analysed by ERT (Scotland) Ltd, which found that the 'fingerprints' of the pollution samples gave a very good match with the sample of Iraq (Basrah crude). The laboratory concluded that the oil residues collected from the north coast of Bahrain on 20 and 24 March 2003 were consistent with what would be expected for Basrah crude which had been exposed to natural weathering processes for a period of several days.

Satellite imagery

- 2.5 MEMAC obtained satellite imagery (visible waveband) from the United States National Oceanic and Atmospheric Agency. The imagery for 14 March 2003 showed the oil to the north of Bahrain covering an area of some 50 square miles indicating that the oil had been spilled some days prior to 14 March. The area was covered in cloud between 6 and 13 March 2003 and so no satellite imagery was available for that period. Although 5 March was cloud free, there was no evidence of any oil on the water at that time. MEMAC concluded that the oil must have been released after 5 March and a few days before 14 March 2003.

Slick trajectory hind casting

- 2.6 MEMAC ran its oil slick trajectory model in reverse from the reported position of the oil on 15 March from the Air Wing aircraft using local wind and current data. This gave a good correlation with the observed position of the oil from the satellite image on 15 March. Further hind casting of the slick trajectory indicated that the oil was most probably spilled on or around 8 March 2003 in the vicinity of the anchorage of the Al Ju'aymah oil terminal off the coast of Saudi Arabia.

- 2.7 Despite intensive enquiries, MEMAC was unable to identify any particular vessel as the source of the oil. The operators of the Al Ju'aymah oil terminal stated that no tanker had visited the terminal with a part load of Iraq oil under the United Nations 'Oil for Food' programme during the relevant period.
- 2.8 MEMAC conducted further trajectory analyses for potential fixed sources of oil to the north of Bahrain to establish whether oil spills emanating from any of these sources could have impacted the coast of Bahrain under the prevailing wind and current conditions. Potential sources were identified as the Al Ju'aymah and Ras Tannurah oil terminals in Saudi Arabia, the Saudi-Bahrain oil pipeline, the Abu Saafah offshore oilfield and pipeline, the Zuluf, Houyt and Marjan offshore oil fields and the Al-Baker oil terminal in Iraq. The trajectory analyses indicated that oil spilled from the two oil terminals in Saudi Arabia or the Zuluf, Houyt and Marjan offshore oil fields would have only impacted that country's coastline and that oil from the Saudi-Bahrain pipeline would have only impacted the west coast of Bahrain. The predicted trajectories showed that oil spilled from the Abu Saafah oil field would not have reached Bahrain, although oil released from the pipeline could have impacted its coast. However, the satellite image obtained for 14 March 2003 showed the oil to the north of the pipeline, and since the winds were constantly blowing from the north during the period of concern, MEMAC concluded that the pipeline could not have been the source. Trajectory analyses also indicated that oil released from the Al-Baker terminal would have stranded on the coast of Kuwait.

Director's consideration

- 2.9 At its October 2002 session the Executive Committee endorsed the interpretation of the 1992 Fund Convention by the Director that the Convention applied to spills of persistent oil even if the ship from which the oil came could not be identified, provided that it was shown to the satisfaction of the 1992 Fund, or in the case of dispute to the satisfaction of a competent court, that the oil originated from a ship as defined in the 1992 Fund Convention (document 92FUND/EXC.18/4, paragraph 3.12.13).
- 2.10 On the basis of the chemical analyses undertaken by ERT (Scotland) Ltd of the pollution samples collected from the coast of Bahrain and the reference sample obtained from the export terminal at Al-Baker, Iraq, the Director is of the view that it is highly likely that the polluting oil was Iraq (Basrah) crude oil. Furthermore, on the basis of the satellite imagery and the trajectory analyses carried out by MEMAC, the Director considers it unlikely that the source of the pollution was an offshore oil field, sub sea pipeline or oil terminal. Although the Al-Baker oil terminal was a potential source of pollution by Iraq (Basrah) crude oil, the trajectory analyses indicated that oil released from the terminal would have impacted the coast of Kuwait. The distance between the Al-Baker terminal and the north coast of Bahrain is some 500 km, and if the prevailing winds had prevented the oil going ashore on the coast of Kuwait, trajectory analyses indicate that the oil would have taken some 13 days to reach the north coast of Bahrain. The Director notes, however, that the chemical analyses of the pollution samples indicate that the oil was relatively unweathered, such that it could not have been exposed to the elements for such a long period of time.
- 2.11 In light of the above evidence the Director is satisfied that the source of the pollution was a ship carrying oil in bulk as cargo engaged either in the transport of Iraq crude oil under the United Nations 'Oil for Food' programme or illegal oil smuggling operations. The Director therefore considers that claims for pollution damage arising from this incident are covered by the 1992 Conventions, and that in the absence of the identity of a specific vessel as the source, the 1992 Fund is liable to pay compensation.

3 Claims for compensation

In April 2004 the 1992 Fund received claims totalling US\$586 000 (£325 000) from a number of government agencies and BAPCO in respect of clean-up costs that they had incurred as a result of

the incident. Claims totalling US\$704 000 (£390 000) were submitted by the Directorate of Marine Resources on behalf of 259 fishermen in respect of property damage and loss of income from fishing.

4 Action to be taken by the Executive Committee

The Executive Committee is invited:

- (a) to take note of the information contained in this document; and,
 - (b) to decide whether claims for compensation arising from this incident are covered by the 1992 Fund Convention, and if so, whether to authorise the Director to settle such claims.
-