

PAJ Oil Spill International Symposium 2002.

Tokyo 6th – 7th March 2002.

Baltic Carrier Incident and the Response to the Spill

by

Peter Soeberg Poulsen

Branch Chief, Maritime Environmental Pollution Combatting

Headquarters Admiral Danish Fleet

pol.con.den@sok.dk

1. INTRODUCTION

This report describes the oil spill operation in the period 29th March to 10th April 2001 in relation to the oil spill resulting from the collision between the bulk carrier “Tern” and the oil tanker “Baltic Carrier” at the maritime border between Germany and Denmark in the early morning hours of March the 29th. .

1.1. The report consists of four parts:

- ?? The collision
- ?? The Alarm call
- ?? Summary of the response to spill
- ?? Conclusion

2. THE COLLISION

The oil tanker BALTIC CARRIER (BC), registered in the Marshall Islands, sailed from Muga, Estonia on 27th March with a cargo of 33,000 tons of heavy fuel oil. The vessel was bound for Milford Haven in southern England. The route was planned through the Danish Straits, Kadetrenden fairway and via the Great Belt.

The bulk carrier TERN was enroute from Cienfuegos, Cuba to Ventspils, Latvia with a full bulk cargo of 5,037 tons of crude sugar.

The vessel took a pilot on board near Skagen, the northern part of the Danish waters. On 28th March at 1235 local time (LT), the TERN passed under the Eastern Bridge in the Great Belt. At 1520 LT, the pilot departed near Spodsbjerg, Langeland. TERN entered the eastbound route of the traffic separation south of Gedser and continued in north-easterly direction into the Kadetrenden fairway. At 2313, TERN entered the deep-water route (DW) on a north-easterly course.

On 28th March at about 2330 LT, BC entered the DW northeast of the Kadetrenden fairway on a south-westerly course. On the ship's bridge were the Master, the 2nd Mate and a deck hand.

On board the BC, they observed TERN on the opposite course in the DW. The vessels were estimated to pass each other red to red and in a safe distance.

Shortly before the vessels would be passing each other, so the official investigation stated, the steering engine on board the BC failed, causing the vessel to turn hard port and swing in front of the TERN on the position 54 43,19N 012 35,01E – in the German Exclusive Economic Zone (EEZ) – on 29th March at about 0015 LT. TERN hit the BC in her starboard (SB) side at starboard tank No 6 containing 2,700 tons of heavy fuel.

BC prepared fire extinguishing pump and fire equipment. The master on board BC requested the Master on board TERN to not reverse out of the hole until, on board the BC, a general view of the situation had been carried out. For about 20 minutes, the vessels drifted together, before TERN reversed from the hole. On board BC, bilge water was pumped into the port side to raise the starboard side of the vessel in an attempt to reduce the pollution.

As TERN sailed in the DW, the BC suddenly turned in front of the TERN, unable to avoid collision with the BC. At the time of collision, the 1st Mate and a Helmsman were on the bridge of TERN.

The collision inflicted very severe damage on the bows of TERN. The vessel's forepeak tank received a large hole, and in the period after the collision, when the ships were linked to each other, about 250 tons of heavy fuel oil from BC ran into the forepeak tank of the TERN¹.

3. ALARM CALL

3.1. On 29th March at 0020 LT, Headquarters Admiral Danish Fleet via Danish Coastal Radio Station Lyngby Radio was advised that a collision between the two vessels had taken place and that in this connection heavy fuel oil from tank No 6 starboard ran into the sea. According to information, tank No 6 starboard contained 2,700 tons.

3.2. The weather in the area at the time of collision was:

Wind	S and SE 15-18 m/s, in gusts up to 22 m/s
Sea	2-3 metres
Visibility	good visibility
Air temperature	3 degrees
Water temperature	2 degrees

¹ About 4 hours after the collision, the TERN sailed under her own propulsion to the Rostock Roads where the ship anchored for inspection and extension of captain's protest to the German and Danish authorities (Danish Maritime Authority).

4. PARTICIPATING VESSELS AND AIRCRAFT STARTING POSITIONS:

4.1. The Danish environmental vessel HDMS GUNNAR SEIDENFADEN was at anchor in the southern Great Belt as fairway surveillance unit. The Danish environmental vessel HDMS GUNNAR THORSON was at Naval Station Copenhagen at 16-hour alert. The Danish environmental vessel METTE MILJOE was at Naval Station Copenhagen at 1-hour alert. The Danish environmental vessel MARIE MILJOE was at Naval Base Korsoer at 1-hour alert.

4.2. GUNNAR SEIDENFADEN was on its way immediately after the alarm call. GUNNAR THORSON departed from Naval Station Copenhagen within 3½ hours and was allocated as OSC. METTE MILJOE departed from Naval Station Copenhagen within the 1-hour alert. MARIE MILJOE departed from Naval Base Korsoer within the 1-hour alert.

4.3. A S-61 from the RDAF was alerted for initial daylight reconnaissance with the appointed OSC on board. HDMS THUROE was performing fairway surveillance in the Baltic and sailed direct to Groensund. The Royal Danish Naval Home Guard cutter KUREREN in port Koege was ordered to sail to Stubbekoebing to serve as a tender.

4.2. Participating units ashore

4.2.1. The following units ashore were alerted:

Regional Centre for the National Rescue Corps, South Zealand
Storstroem County

Nykoebing Falster local Police Dpt.

ADF requested Naval Base Korsoer to transport floating barrages to Stubbekoebing from the stockpiles of Regional Rescue Centre, South Zealand, Naval Base Korsoer and from the Municipal Stockpile in Kalundborg.

At the same time, Regional Rescue Centre, South Zealand was requested to establish a Command Post in Stubbekoebing.

Immediately after the initial report from Lyngby Radio about the collision, ADF called in the ADF Branch Chief (Environment Section) and the Marine Environment Officer who after arrival at the ADF initiated alarm of the above authorities and the foreign authorities mentioned below.

ADF management decided that 24-hour watch should be established in the Environment Element in order lead the operation. Also in ADF Operations Centre, an additional post as Duty Officer was established who should make sure that the media and Defence Command Denmark were continuously briefed on the development of the situation.

4.2.2. Assistance from neighbouring countries

According to international agreements signed by Denmark, including the Copenhagen Agreement, Helsinki Commission (HELCOM) and the Danish, German Bilateral Agreement (DENGER), HQs Swedish Coastguard and German Federal Marine Pollution Control Unit, Cuxhaven were contacted to assist with environmental protection vessels and marine environment surveillance aircraft.

5. GENERAL VIEW PHASE

The German environmental protection vessel SCHARHÖRN was the first unit near BC. SCHARHÖRN monitored BC during the entire operation.

On Thursday 29th March by first daylight at 0638 hrs, an RDAF S-61 rescue helicopter with the OSC on board reconnoitred the area to enable the OSC to have a general view of the situation around the disabled vessel and the spill of the oil. In connection with the reconnaissance, large and small oil slicks were observed which stretched from BC and in north-westerly direction to Groensund; it was expected that the oil would hit the coast at Hestehoved on Falster on Thursday 29th March at approx 1500 hrs.

On the arrival of the environmental protection vessels to the oil pollution, it was attempted to start oil pollution operation, but because of the high sea, 2 to 3 metres, and the strong wind, 18-20 m/s, it was impossible to encircle and to control the oil. Therefore, on Thursday 29th March, the Danish and foreign environmental protection vessels could do nothing but observe and monitor the drift of the oil, both on the open sea and in Groensund.

By first daylight on Friday 30th March at 0700 hrs, reconnaissance of the area was carried out by a Navy Lynx helicopter, which observed the following:

In the channel leading to Groensund, both the southern and the northern coastlines were polluted in spots. From Haarboelle point to the abutment of the Faroe/Falster bridge on Faroe, the Groensund coasts of Moeen, Bogoe and Faroe were heavily polluted with the heaviest environmental impact around Haarboelle harbour, Bredemage Hage and the inlet between Faroe and Bogoe.

The pollution was right close to the coast and immediately inaccessible from the sea. In addition, a large pool of oil was observed at Kirkegrund (just to the east of Vordingborg) and scattered oil spots in Groensund and Hjelm inlet.

6. POLLUTION CONTROL PHASE

On Sunday 1 April, ADF decided to send a liaison officer to the area. The liaison officer's task was to relieve the OSC, to assist in handling the media present, and handle the task as general information officer as well as coordinate the cooperation between the OSC and the Command Post.

The liaison officer remained in the area until the transfer of the cleaning-out from the state preparedness to the municipal preparednesses had taken place on 10th April.

6.1. Deep-sea areas:

The weather on Thursday 29th March was too rough to control and recover the oil at sea. Nevertheless, the environmental protection vessels GUNNAR THORSON and GUNNAR SEIDENFADEN tried to place their booms off Hestehoved Dyb. However, these attempts were futile, because of the high sea and the strong wind.

The environmental protection vessel MARIE MILJOE also tried to place a boom in the entrance to Groensund at Hestehoved Dyb to prevent the larger oil spots from running into Groensund. Because of the concentration and consistency of the oil (asphalt-like), both

main engines failed and the oil carried MARIE MILJOE to shallow waters. MARIE MILJOE had to anchor for repair of the main engines, while the oil continued its drift into Groensund. Also, a buoy in the Nyt Loeb fairway was torn loose and carried along by the oil.

ADF and the Command Post considered placing floating barrages across the Groensund at Haarboelle harbour to prevent the oil from entering the Groensund. It was estimated, though, that this would have no effect because of the high sea and the ingoing current at about 4 to 5 knots. The floating barrage across the Groensund would either be torn up or the oil would have passed under the floating barrage.

After the overview phase on Friday, it could be established that the part of the oil that immediately could be controlled from the sea was the large pool at Kirkegrund and accumulated spots of oil from Hjelm inlet and in Groensund.

The large pool of oil (about 960 tons) at Kirkegrund was contained and recovered by means of the four Danish environmental protection vessels, and later on KBV-048 and JOHN MADSEN. The navy cutter THUROE and the Naval Home Guard vessel KUREREN were given the task of keeping the floating barrage with the pool on deep waters so that picking up of the oil could be carried out.

The oil spots in Groensund and Hjelm inlet were recovered by the German environmental protection vessels VILM and SCHARHÖRN.

During the deep-sea operation about 1100 tons of oil were recovered up.

6.2. Shallow water areas:

After the overview phase on Friday 30 March, it was established that vessels with shallow draught and capable of operating in shallow waters were required.

Subsequently the following vessels were chartered:

JOHN MADSEN, Danish excavator vessel

JAMES, Danish bunker vessel

AURIGA, Danish diver's vessel

MULTISUND, Danish tug

Besides, the Command Post in concert with ADF had chartered contractor's equipment for pick up of the oil on the coast and in the near-shore areas, and for transport of the oil.

JOHN MADSEN was quickly transferred from the shallow water operation, as the vessel was better suited for the work with the large pool at Kirkegrund (the possibility of grabbing with a large grab bucket). AURIGA did not prove useful in the operation and therefore was relieved of the contract on Sunday 2 April.

Furthermore, through the arrangement of representatives of the insurers of the BC (THEO KOCH & CO, Copenhagen) 3 lighters (FENJAR, MENJAR and DM 023) were chartered for storage of the oil.

ADF arranged requisition of two Swedish vessels (KBV-75 and KBV-80) with low draught from HQ Swedish Coastguard.

At the shallow water operation about 2,900 tons of oil containing sand, gravel and stones were picked up.

6.3. Transfer to the municipal preparedness:

On Monday 9th April at 1400 hrs, it was the assessment of the state authorities (ADF and Rescue Center, South Zealand) that the pick up of oil at sea, in the near-shore waters and on the coast had been completed. The subsequent cleaning up of the beaches was to be carried out by the municipal preparedness who according to the Marine Environment Protection Act are responsible for the cleaning up of beaches.

Against the background of the above transfer of the pick up of oil from the state preparedness to the municipal preparednesses, an inspection of the area was carried out by an RDAF S-61 rescue helicopter. Representatives from the municipalities of Vordingborg, Stubbekoebing and Moeen took part in the inspection. The OSC and the leader of Rescue Centre, South Zealand participated as coordinators of the shallow water operation.

After the inspection, the municipalities of Stubbekoebing and Vordingborg accepted to take over the responsibility for the continued cleaning out of the beaches. The municipality of Moeen requested the state preparedness to carry out a better cleaning out of the oil in the near-shore areas at Bredemede Hage. This cleaning out of the oil was accomplished on Tuesday 10 April by arrangement of Rescue Centre, South Zealand. After the cleaning out of the areas in the near-shore waters by Rescue Centre, South Zealand, the municipality of Moen accepted to assume responsibility for the continued cleaning out. After the final transfer of the responsibility to the municipal authorities, the operational part of the state preparedness was ended on Tuesday 10 April at 1715 hrs.

7. DISPOSAL PHASE

7.1. Deep sea areas

Unloading of the oil picked up by the ships took place in Vordingborg harbour by heating of the oil onboard the vessels with assistance from a civilian company that was able to heat the oil to the unloading temperature of 80 degrees C. The Danish environmental protection vessels was only able to heat to 48 degrees C, therefore the assistance of a civilian company was required.

After the oil had been heated, it was pumped into gully emptier trucks, which transported the oil to Kommunekemi, Nyborg, for destruction. Alternatively, the oil was stored in barges.

The discharge of the German environmental protection vessels VILM and SCHARHÖRN was carried out in Germany.

7.2. Shallow water areas

The oil that had been picked up in shallow waters and on the beaches was transported to Vordingborg harbour, where it was stored in the chartered lighters (FENJAR, MENJAR and DM 023). After the lighters had been filled, the remaining part of the oil picked up was moved from the harbour and placed in silos at the shut down sugar mill at Stege.

The oil picked up will be brought to Kommunekemi for destruction. ADF is unaware of whether this has taken place (17 May 2001).

7.3. BALTIC CARRIER

After the collision, the BC anchored on the position 54 43,6N – 012 30,1E. Subsequently, ADF after consultation with the Danish Maritime Authority, gave the BC permission to move the ship to a new anchorage 54 49,0N – 012 25,9E in the Danish EEZ about 5 nm north of the Kadetrenden fairway on 31 March at 1217 hrs.

On 5 April at 0838 hrs, ADF in concert with the Danish Maritime Authority issued a permission to have the remaining cargo (about 30,000 tons of heavy fuel oil) from the BC lightered to the lighter TERVI and transported to Milford Haven in southern England.

The leak on tank 6 SB of the BC was temporarily repaired by arrangement of a German firm, which welded a steel net over the hole on tank 6 SB. The steel net was to prevent the remaining oil in the bottom of tank 6 SB from running into the sea.

ADF in concert with the Danish Maritime Authority issued a permission that the BC could start transfer to a shipyard in Stettin, Poland, on Saturday 7 April at 1000 hrs, if the BC was taken in tow by two tugs and a pilot was onboard during the transfer through Danish waters.

The German environmental protection vessel SCHARHÖRN and the naval cutter HDMS ROEMOE escorted the BC via the Swedish EEZ to the Polish EEZ, where ROEMOE left the area. The German environmental protection vessel SCHARHÖRN escorted the BC to Stettin.

8. AMOUNT OF OIL COLLECTED

- ?? 2.700 m³ was spilt into the sea.
- ?? 1.100 m³ oil collected at sea.
- ?? 2.850 m³ oil and debris collected on shore.
- ?? 250 m³ located and collected in the bulkcarrier TERN.
- ?? 30 m³ located and collected in the oil tanker BALTIC CARRIER.
- ?? Approximately 2.000 birds have been destructed and it is expected that 4.000 to 4.500 have been infected by the oil.

9. CONCLUSION

- ?? The alarm phase was very satisfactory.
- ?? The Danish environmental protection vessels HDMS GUNNAR THORSON and HDMS GUNNAR SEIDENFADEN, and HDMS MARIE MILJOE and HDMS METTE MILJOE were available in the areas within a timeframe that can be called very satisfactory in relation to their ordered notice.
- ?? The efforts of the navy cutters and the Naval Home Guard cutters in the operation were crucial to the success of the operation.
- ?? The cooperation with foreign environmental units, including aircraft, was very satisfactory.

- ?? The OSC using a helicopter should get a quick general view of the situation, including the spread, concentration and movement of the pollution.
- ?? An oil sample from the pollution must be taken in connection with the initial reconnaissance by helicopter for quick analysis of the composition of the oil, including particularly toxic substances, so that measures can be implemented as soon as possible.
- ?? The weather situation and the properties of the discharged oil with a high viscosity caused the oil to be impossible to contain and pick up on the open sea with the existing pollution control equipment on board the environmental protection vessels. The high viscosity of the oil also made it difficult to pick up oil in shallow waters. The task was only accomplished by using grab buckets. This job was solely carried out by civilian chartered equipment.
- ?? In Denmark, no ships are available for oil pollution control in the near-shore areas.
- ?? Transfer of the responsibility from the state preparedness to the municipal preparedness must take place in agreement between the parties on a secure basis (cooperation agreements).
- ?? Participating environmental protection vessels were unable to heat the picked up oil to the discharge temperature which owing to the high viscosity of the oil had to be 80 degrees C.
- ?? With the present loading capacity, the state preparedness cannot count on disposal of the picked up oil for deposition as quickly as desirable.
- ?? The cooperation between the involved authorities in connection with the operation, including ADF, Danish Maritime Authority, The Norwegian Veritas, P & I Guard, THEO KOCH & CO, Interiorient Navigation, as owner and state of registration, was satisfactory.
- ?? The good relations established through the Danish Armed Forces' participation in the different international forums, including The Helsinki Commission (HELCOM), The Bonn Agreement, European Commission and the Copenhagen Agreement and the particularly good relations with the German and Swedish Environmental Protection Authorities, were crucial to the success of the operation.

Furthermore, in order to address the increased density of shipping the Baltic Sea Area, and as an political reaction to the collision between the oil tanker BALTIC CARRIER and the Bulk Carrier TERN, HELCOM arranged an Extraordinary Ministerial Meeting on 10th September 2001. At that Meeting a package of measures was adopted by the relevant Secretarys of the Baltic Sea States to ensure the safety of navigation as well as to ensure adequate emergency capacity in the Baltic Sea Area (the HELCOM Copenhagen Declaration and HELCOM Recommendation adopted by the Ministers can be found on the HELCOM web-site; www.helcom.fi as well as background document to the HELCOM Copenhagen Declaration)