

The PALLAS Accident



PALLAS on 07.11.1998
(Photo by Frank Behling,
drawn from the book
"Havarie" by Jan Mordhorst,
Koehlers Verlagsgesellschaft,
1999, Hamburg)

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Introduction

On the afternoon of 25.10.98, the Italian-owned general cargo M/V PALLAS, 27 years old and flying the flag of the Bahamas, was on her voyage from Sweden through the English Channel to Morocco. In stormy weather, the vessel caught fire off the Danish coast near Esbjerg on the Danish continental shelf about 55 nm off the coast. On 28.10.98, the averaged burning cargo vessel stranded two nautical miles off Amrum in Schleswig-Holstein, Germany. Onboard this vessel, apart from the burning cargo of timber, there were about 700 t of heavy fuel, diesel and some other oil. In total, about 244 t of the fuel oil and oil sludge spilled into the sea through a tear in the damaged ship hull after stranding. The oil polluted the beaches on the islands Amrum, Föhr, Sylt as well as the 'halligen' Hooge and Langeness in Schleswig-Holstein, Germany. It is estimated that about 26,000 birds, mainly eider ducks and common scoters were oiled and, in total, about 16,000 of them, at minimum, died during the PALLAS accident.

In the following, a brief report of the accident, the stranding, oil spilling as well as the pollution control activities is given (see sources). All detailed information concerning the amount and types of oil onboard the PALLAS are based on information given by the German Federal Ministry of Transport, Building and Housing. A map shows the drift-line, including the position of the PALLAS since about the beginning of the accident, until the stranding. An overview of the impact on the

environment is presented, especially regarding birds and seals. Furthermore, the activities and investigations for the cause of the accident, initiated after the accident, are introduced.

PALLAS: Trouble at Sea

Immediately after the pan-call "fire on board" by the PALLAS in the afternoon on 25.10.98 to the MRCC Århus, Denmark (Maritime Rescue Coordination Center), the Danish rescue vessel NORDSØEN was ordered to the area. The captain of the PALLAS altered his course to reach the port of Esbjerg. The Danish salvage company SVITZER informed the MRCC Århus that there was no ship (tug) in the area with sufficient capacity to assist in the rough weather conditions. The offer of the Danish company MÆRSK SUPPLY - given to MRCC at UTC-time 21.49h - to send the HAVILA CHAMPION, a vessel with sufficient emergency towing capacity, was not taken, respectively, a request was not made. At 22.54h, the PALLAS transmitted a mayday-call because of open fire in the holds and requested fire-fighting assistance.

Within the next 4 - 5 hours - after, more or less, unsuccessful attempts to extinguish the fire - the crew of the PALLAS was rescued from the vessel. One of the 17 crewmembers died during the rescue operations. The, more or less, burning PALLAS was an abandoned vessel with the main engine running, the propeller turning and drifting southwest of the Lister Deep into the direction of the German coast. The ZMK resp. the Ves-

sel Traffic Service, VTS in Cuxhaven at the "Wasser- und Schiffsamt Cuxhaven" (WSA), which is responsible for traffic regulating measures, gave the operational order to the multi-purpose-vessel MELLUM and later to the pollution-counter-measure-vessel NEUWERK.

In the meantime, on the morning of 26.10.98, the PALLAS crossed the border into the German sea area of responsibility and the NEUWERK and MELLUM started combating the fire. Several attempts to make a towing connection with the PALLAS were not successful. However, since about 19.00h, the PALLAS had been towed by the MELLUM southwestwards into the direction of Helgoland until the connection with two ropes tore at 12.20h on 27.10.98.

The salvage tug OCEANIC - chartered by the German Federal Ministry of Transport for emergency towing tasks in the German Bight - was involved in an accident of the bulk carrier RUBY XL, which had run into problems in the sea area off Terschelling/Ameland, NL on 24.10.98. These operations were finalized in the afternoon of 26.10.98. The OCEANIC was ordered to assist and combat the fire onboard the PALLAS and arrived there on 27.10.98 at 8:28h.

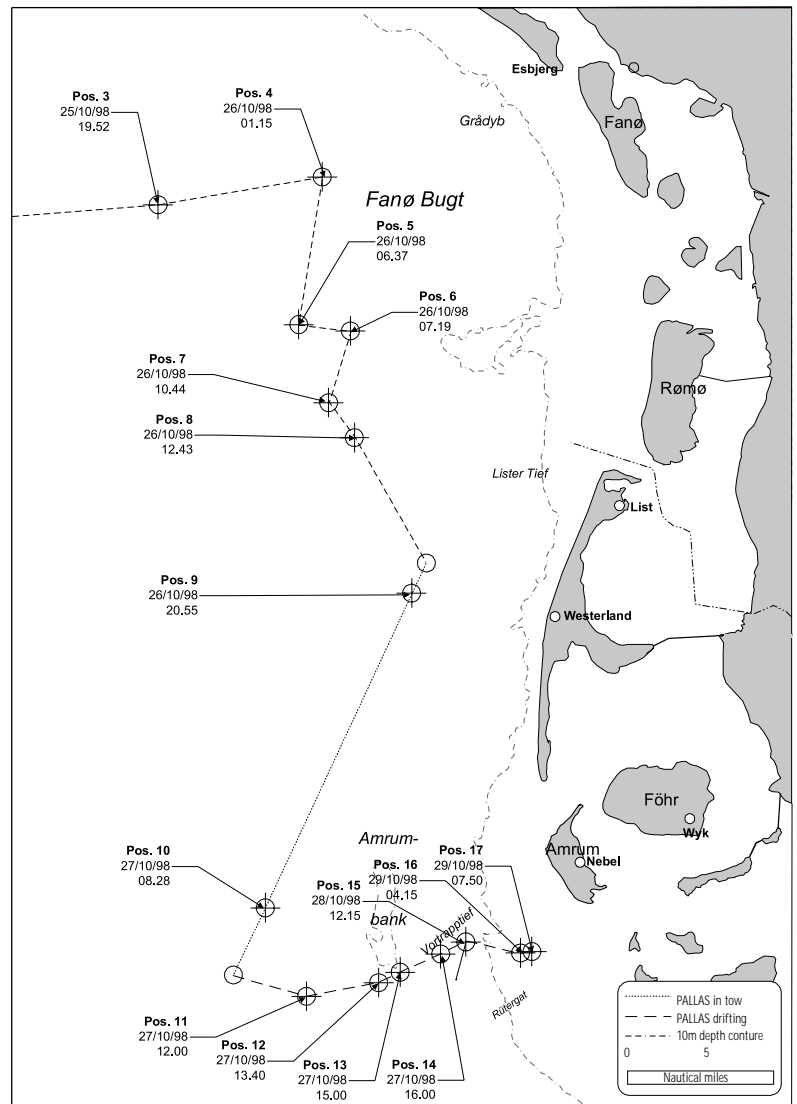
All further attempts to tow the PALLAS into the open North Sea also failed, not least because of the very bad weather conditions: strong winds (7-9 Bft.) to heavy storm (10 Bft.), rough sea, autumn/winter season and the shallow water.

After Stranding

The burning PALLAS stranded 2 nm off the coast of Amrum in Schleswig-Holstein (54° 32,5' N; 008° 17,24' E) on 29.10.98. During the following days, all maneuvers and salvage attempts failed. The tug attempts were suspended after a break in the hull of the PALLAS was confirmed on 06.11.98. The ship was declared a wreck.

Combating fire and oil disposal

The owner of the PALLAS was responsible for combating the fire and the oil disposal. Because the Italian owner did not react in time since the stranding and because of impending oil pollution, the German Emergency Task Force (Einsatzleit-gruppe, ELG) took over the responsibility for the salvage of the wreck. Measures for combating the fire and oil disposal were initiated with the Dutch firm Wijismuller. The fire had been extinguished since 23.11.98.



PALLAS drifting and in tow between 25.10. and 29.10.1998 (GAUSS 1998/98)

On 12.11.98, under calm weather conditions, Dutch experts started preparational measures to discharge the oil. The surging of the oil was made with the support of the jackup-plattform BARBARA from Rotterdam. In total, about 305 cbm of mostly heavy fuel oil including 19 cbm of diesel oil were pumped off. The last fluid oil residuals were skimmed and the remaining bituminous oil sludge had to be collected by a dredge by the BARBARA. The oil disposal (about 444 t) and the discharge of the cargo residues had been finalized on 10.01.1999. The amount of remaining oil residues on board was estimated to be about 4 t.

Oil spilling and pollution control

On board the PALLAS, there were about 550 t of heavy fuel oil (IFO 180) and about 130 t of diesel oil as well as about 15 t of lubrication, hydraulic and waste oil. Part of the oil spilled steadily into the sea through a tear in the damaged ship hull between 30.10 and 10.11.98. In total, during the PALLAS accident, about 244 t of oil spilled into the sea. Due to the bad weather conditions, the

German oil spill response fleet was not fully able to combat the spills on sea. Until 23.11.98, the oil-combat-ships had collected a total quantity of about 250 cbm of oil-water mixture and about 18 cbm of separated oil. An unknown quantity of oil burnt. According to the advanced status of the salvage activities, the risk of new considerable oil spills and oil pollution of beaches was estimated as low after 15.12.98. However, on 19.12.98, oil again spilled into the sea, and 300 l were collected by the oil-combat-vessel KNECHTSAND.

The oil polluted the beaches of the islands of Amrum, Föhr, Sylt-Hörnum, the southern tip of Hooge, Langeness, Norderoog as well as all outersands. Clean-up operations were necessary along Föhr, Amrum, Sylt, Hooge and Langeness and were concluded after the first oil spill on 12.11.98. The southern coastline of Föhr was polluted again on 23.11.98 and cleaned the next day. In total, 870 t of oil-sand mixture had been collected and disposed off. It is assumed that the beaches will not be damaged permanently by the oil, which was collected as soon as it was beached. Neither salt marshes nor Danish beaches were polluted during the accident.

Environmental Impacts

Impact on Birds

According to data from bird monitoring over the last few years and topical surveys in the concerned area, it can be assumed that there were about 130,000 birds (sea ducks and waders) in the area in November/December during the year. November is the month with the highest numbers of eiders (about 100,000 birds) and common scoters in the Schleswig-Holstein Wadden Sea and the adjacent offshore area.

It is estimated that about 26,000 birds were oiled and, in total, about 16,000 birds, at minimum, died during the PALLAS accident. About 12,000 birds of 34 species, mainly eider duck (more than 70%), common scoter (about 20 %) as well as waders such as dunlin, oystercatcher, grey plover, bar-tailed godwit had been found dead due to the PALLAS oil spill in Schleswig-Holstein and Denmark until mid December 1998. Besides these 12,000 oiled birds which were found dead, also birds which were not found on the beach and which died at sea and sank, as well as birds which were not documented or counted before transportation to rehabilitation stations, have to be

included in the list of oil victims. Hundreds of oiled birds were washed ashore on the coastlines of the islands and the mainland in North Frisia as well as in Dithmarschen, either dead or still alive, had very little chance of survival.

According to an estimate of the national coordinator of the Trilateral Monitoring Group of Migratory Birds in Schleswig-Holstein, at minimum, half of the stock of sea ducks, such as eiders and common scoters, in the area - at the time of the accident - fell victim to the oil. Taking the entire Wadden Sea of Schleswig-Holstein into consideration, about 11% and 18% of the - at the time - topical stocks of eiders and common scoters died because of the accident (WWF 1999). These numbers cannot be neglected because, already in February and March 1998, about 8,500 birds were killed by two other oil pollution cases in the Danish Wadden Sea Area and the majority of these birds were also common scoters (see WSNL 1998 - No. 1: 24 - 25).

The fate of about 10,000 waders, which were present in the area at the beginning of the PALLAS accident, is unknown. A few of these birds were heavily oiled; most of them were only lightly polluted. Only a few were found dead. Because of the cold snap in November, the flocks migrated to their wintering areas in France and Great Britain. It is nearly impossible to calculate the loss of waders due to the oil accident.

Impact on Seals

Besides birds, also common and grey seals were threatened by oil. There were some hundred common seals (total stock in Schleswig-Holstein approx. 5,500) in the area and the only small reproductive colony of grey seals (about 50 animals) in Germany is located on Jungnamensand, an outersand of Amrum. The first grey seal pup was born on another outersand in the beginning of November 1998.

However, the seals were mostly unaffected by the spilled oil of the PALLAS and only a few seals were in the area around the Knobsände during the accident. Only one dead common seal and some lightly oiled ones were documented. Apparently, the seals left the area in time. Possibly, the activities of the oil-pollution-control vessels and several helicopters scared the animals away, which was a positive effect of disturbance in this case.

Impact on the Seabed

In November and December 1998, two research vessels of German research institutions investigated the sea area around the PALLAS and collected water and sediment samples. Both crews stated that neither visual oil pollution on the seabed and sediment in the area of the wreck nor affected haul-out sites of the common seal and grey seal could be documented during their investigations. Due to the proportionately small amount of spilled oil, strong negative effects on the seabed were improbable.

However, there were reports from shrimp fishers from the area on oiled fishing vessels, nets and gears, also at a distance of 50 km away from the PALLAS. They, therefore, had to avoid the area around the PALLAS.

Activities for Enlightenment of the Accident

The German Federal Ministry of Traffic, Building and Housing established an independent expert commission "Average PALLAS" for the investigation and evaluation of the PALLAS accident. The task of the expert commission is to assess the existing emergency concept as well as to propose further developments and improvements of the safety concept for the German North and Baltic Sea coasts (Verkehrssicherheitssystem Deutsche Küste, VSDK). Proposals for the optimization in the German area as well as on an international scope should also be included. It is expected that the expert group will give a statement for the future regarding the needed capacity of emergency tugs and fire service vessels, the technical equipment of pollution-countermeasure-vessels, the education and training of teams, the possibilities of interventions by the authorities during salvage operations as well as possibilities for the improvement of liability- and shipping insurance. The expert commission initiated its work on February 10, 1999, and will finalize its work until the summer to submit a final report in autumn 1999.

In Schleswig-Holstein, an inquiry commission of the state parliament (Parlamentarischer Untersuchungsausschuß) was established at the end of December 1998 to investigate and assess the PALLAS accident and to remedy the deficiencies relevant for the federal state. The expert commission has to finalize its work until the summer 1999

after initiation of the work in January 1999. Furthermore, the state government in Schleswig-Holstein ordered a weak-spot analysis (Schwachstellenanalyse) regarding the PALLAS case in December 1998. An investigation of the PALLAS accident will also be carried out at the German Admiralty Court in Kiel.

What to do with the wreck now?

The wreck of the PALLAS will remain in the Wadden Sea because the salvage of the wreck would need too much effort and costs and additional environmental impact could be expected. German authorities decided that the wreck will be sealed up and to remove great parts of the vessel in 1999. Thereafter, sand will be pumped into the wreck so that the PALLAS will not be visible anymore. These works will start in late May 1999 and are expected to be finalized by the end of June. The costs for these last activities regarding the PALLAS cannot fully be estimated at the moment.

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