Incident information sheet AMBES 2007

The incident

On 12 January 2007 at 08h00, a crude oil storage tank belonging to the Canadian company Vermilion Emeraude Rep, located in Ambès (Gironde, France) on the oil storage depot operated by the Société Pétrolière du Bec d'Ambès (SPBA) gave way.

The entire contents of the tank, 13,500 m3 of Aquitaine crude oil, were suddenly released, creating a wave effect causing some 2,000 m3 of oil to spill over the top of the retention tank.

The spill

Most of the 2,000 m3 of oil spilled quickly reached the drainage system, then the settler, meaning that the pumps used to transfer the settled water into the natural environment had to be immediately stopped.

Aerial view of the oil storage and slick on the Garonne, 12/04/07
©TASO/SPBA

A small part of the oil flowed out of the depot to pollute, on the eastward side, nearly 2 km of marshland trenches and channels, deeply infiltrating into the ground and reaching the water table. On the westward side, the pollution reached a main road and the river Garonne. On the south side, the oil spread over the ground and deeply through channels, it crossed over the main road where most of it was then contained in a parapet along the Garonne. A limited quantity however spilt over the parapet and slightly polluted the upper part of the bank.

Oil accumulated in the settler ©CEDRE

Around 50 m3 flowed into the river as the tide was beginning to rise. The slick mainly remained contained along the right bank, but moved up the bank as the tide came in. Sheen was observed as far as the bridge of Aquitaine some 12 km upstream. When the tide changed, the slick began to drift downstream, to reach the "Bec d'Ambès" (where the Garonne and the Dordogne rivers meet).

On 13 January, traces of pollutant were observed over 20 km downstream of the depot as well as on the Dordogne. The following tides caused 40 km of embankments of the Garonne, the Dordogne and the Gironde rivers to be polluted. The most heavily polluted 10 km were the right banks of the Garonne and the Gironde.

Evolution of natural cleanup on the banks ©GOOGLE EARTH

Some oiled birds were reported during the first surveys carried out on the river, but the Ligue pour la Protection des Oiseaux (Birdlife France) did not attest to any particular impact on the avifauna. A few dead coypus were also reported. In the marshland channels, traces indicated that wild boars had been wading through the oil, spreading it as they went. No particular impact was reported however by environmental associations or hunters.

Initial emergency response

The first emergency response measures taken were to ensure the safety of personnel and installations:

- alerting authorities and fire service
- activating the internal emergency plan
- switching on foaming agent spraying systems to prevent evaporation of volatile fractions and thus reduce the risks of fire
- evacuating all personnel onsite
- stopping operations and cutting the power
- requesting the closure of the nearby major road.

Foaming agent sprayed in the retention tank ©CEDRE

To ensure the safety of personnel, all onsite operators were required to wear a chemical cartridge respirator for the first month of the operations. All the personnel also underwent regular medical examination (blood and urine tests) to ensure that their health was not affected.

The closure of the crude oil depot forced Vermilion Emeraude Rep to temporarily stop the exploitation of the Lake Parentis oil wells in the Landes region of France, from which the oil is transported by pipelines to be stored in these tanks. A few days later, the exploitation could be partially restored, with the oil being transported by road to other storage facilities in the region.

Response operations

On 12 January at 10:30 a.m., CEDRE was informed of the accident by the Bordeaux port authorities. CEDRE was subsequently contacted by Total (shareholder of the operator SPBA), then by the local authorities of the Gironde area, who reported a spill of 50 m3 into the Garonne. Two members of CEDRE's response team were mobilised. They arrived at the depot on 13 January 2007. CEDRE's onsite intervention was mainly based on the protection of the aquatic environment (rivers and channels) and later on their clean-up. The FOST (Fast Oil Spill Team: stockpile of equipment belonging to TOTAL and operated by the personnel of the military fire brigade of Marseille) was also mobilised.

Daily aerial, nautical and on foot reconnaissance surveys were organised on the first five days. These surveys helped to assess the situation (50 m3 of oil drifting and 40 km of soiled banks) and to define intervention strategies on the Garonne, Dordogne and the Gironde rivers. The priority was to stop the pollutant from leaving the site.

Pumping of the pollutant outside of the depot ©CEDRE

From 12 January, major pumping operations were conducted on the main road, in the trenches and in the drainage ditches. The rainwater drainage ditches were plugged with earth. Meanwhile, dispersants were applied. The river traffic was temporarily interrupted, but resumed later the same day to promote mixing of the oil in the water column.

The buoy tender the Gascogne, equipped with a weir skimmer and an "Aristock" tank, was mobilised but experienced difficulties in recovering the oil due to the heavy currents and extensive spreading of the oil.

Sorbent booms were set up by coastal pilots around all the wharfs in the area to trap floating pollutant. The FOST also deployed sorbent booms, as well as a shore-sealing boom, and later a makeshift boom, in front of the rainwater outlets from which oil was being discharged.

Collection of waste by the recovery unit ©CEDRE

The Piranha oil recovery unit, a boat able to navigate in very shallow waters, arrived onsite. It was equipped with side nets designed to recover floating waste in the Mediterranean ports. The Piranha began the dynamic recovery of trails of pollutant

and floating waste. Its efficiency was later improved by filling the bottom of the nets with sorbents.

On 19 January, a decision was made to build cofferdams on the banks of the Garonne using a power shovel at all the rainwater outlets in line with the site. These structures were constructed in order to create a trench where the oil would accumulate, under constant monitoring, and then be pumped out when necessary. These constructions were rebuilt after every spring tide which weakened them.

On 20 January, the company Atlantique Haute Pression (AHP), specialised in pressure washing, mobilised by the site operator, began initial clean-up of the banks, which involved the collection of patches and patties, both clean and oiled waste, to prevent clean waste from being subsequently oiled.

The monitoring and maintenance of the sorbents (used to recover the pollutant rinsed from the banks by the river) in line with the site by the Piranha and FOST, the collection of residual floating pollutant by the Piranha and clean-up on the banks by AHP continued until 25 January.

It was not thought necessary to conduct final clean-up operations on the banks of the Garonne, as these areas were difficult to access, dangerous, sensitive to excessive trampling and subject to a high level of natural clean-up by the river. Furthermore, nautical reconnaissance carried out by CEDRE on 13 and 24 January showed rapid rinsing of oiled vegetation: the 10 km the least affected had been naturally cleaned by 24 January.

The reconnaissance survey conducted on 6 March showed that only 10 km were still polluted and that the vegetation had begun to grow back on the banks. The reconnaissance survey conducted on 5 April showed that the stretch still polluted had reduced to 3 km on the right bank of the Garonne. The last survey on 3 July showed only 3 small clutters of oiled vegetation close to the depot.

During the winter of 2007-2008, the marshland channels were regularly monitored and did not show any worsening of the situation. In February 2008, all of the water sample analyses revealed no trace of oil. Ground samples were analysed in September 2008 and results confirmed the natural attenuation of residual pollution, as predicted by CEDRE's lab team. Weekly monitoring is still carried out during the summer to provide reassurance for all of the stakeholders. One last visit, organised on 18 September 2008, helped confirm the interruption of the constant monitoring system.

The trial

On 13 October 2014, the Public Prosecutor of the criminal court in Bordeaux required the SPBA and its former president to pay respectively 30,000 Euros and 5,000 Euros in fines. The main subject of the hearing was the decisions made by the former president regarding a similar spill on the same retention tank on 11 January 2007. The prosecution (protection associations for the environment, fauna and flora, as well as the Macau municipality) reproach him for not having emptied the tank during this first

spill. Lawyers representing the SPBA and the former director asked for acquittal since, according to them, no infraction was committed. The tribunal ruled on 17 November 2014. Acquittal was pronounced in December 2014.

In October 2016, the Court of Appeal in Bordeaux recognised the responsibility of the DPA but judged the compensation request from the prosecution (municipality of Macau and ASPAS, LPO and SEPANSO Gironde associations) inadmissible. They contested the decision in the Court of Cassation, which overturned the ruling on 16 January 2018 but only on the points regarding compensation and court costs for the prosecution.

A new trial started on 6 June 2019 in the Court of Appeal in Bordeaux. The ruling must be given before 26 September 2019.