



Oil Spill Response

BP Refinery
Kwinana, Western Australia



Preventing loss of containment is at the core of how the refinery operates. We are always mindful that, despite rigorous processes, oil spills can occur. The Refinery has an oil spill response plan in place, and is equipped and trained to contain and minimise the impacts of small and large spills.

The Refinery's main aim is to prevent oil spills. When a spill does occur the Refinery works to contain and recover any spilled oil.

The major causes of oil spills around the world are:

- routine operations such as refuelling, loading or unloading
- mishaps and collisions between vessels or tankers and other transportation vehicles
- ships running aground
- ruptured pipelines
- oil exploration activities
- mechanical failure of oil collection and storage equipment

The impact of an oil spill on the environment is determined by the type and volume of oil spilled, whether the spill occurred on land or water, nature of the immediate environment, season, local temperature, weather and tidal conditions, and effectiveness of oil spill response.

A Co-ordinated Response

The Refinery's main aim is to prevent oil spills. Where a spill does occur the Refinery works to contain and recover any spilled oil. The design and construction of refining units assists this aim, with features such as concrete bunding around some storage tanks, and a dedicated sewer system for oily water.

The Refinery has an oil spill response plan which details the procedures in the event of a spill, the responsibility of external agencies and itemises the oil response equipment that is available within the Refinery.

Vacuum trucks are used to recover spilt oil on land, and the oil can be reprocessed through the Refinery. The Refinery has a waste management area for treating any soil that is contaminated by the oil. A broader selection of equipment is available for responding to marine spills, including:

- A purpose-built boat that can be mobilised quickly to provide initial estimates of the size of the spill and monitor the area affected until other vessels reach the site. Surrounding the boat are large floats, which ensure stability even in the roughest water conditions, and the boat's interior provides enough room to enable the carrying of equipment and containers for holding the retrieved oil.
- The Refinery has a skimmer, which is very successful for removing oil from water. The skimmer floats on the water surface and has oleophilic (oil loving and water repelling) discs rotating through the water column. The oil adheres to the discs, is scraped to a central collection point and is then pumped to storage.

- Large quantities of absorbent material are stored on site, including mats, pillows, nylon string, and sausage booms.
- Inflatable boom is also stored on site and is used to limit the spread of an oil spill. The booms' inflatable buoyant tubes float on the water surface with a weighted skirt attached below.
- Fast tanks are also stored on site. The tanks are like an above ground swimming pool and can be used to store recovered oil, which is then processed through the Refinery. Each tank holds approximately 10,000 litres.

Other techniques that could be adopted in the event of an oil spill are hot water washing of rocks and walls and removing contaminated sand using heavy equipment. These techniques may be used in isolation, or in combination, depending on the maritime and environmental conditions of the area.

Depending on the size and location of a spill, a number of external organisations may become involved in the response efforts. Fremantle Ports has statutory authority and responsibility for oil spills in Cockburn Sound. The Department of Planning and Infrastructure, the Australian Maritime Safety Authority (AMSA) and the Australian Marine Oil Spill Centre (AMOSOC) are also able to assist with advice and equipment. If wildlife is exposed to spilt oil, specialist external agencies are called to assist with animal care.

The Refinery's emergency response personnel are on call 24 hours a day, seven days a week to respond to any incidents. The team conducts regular training exercises, in conjunction with external response agencies, to ensure all parties are familiar with the equipment and procedures.