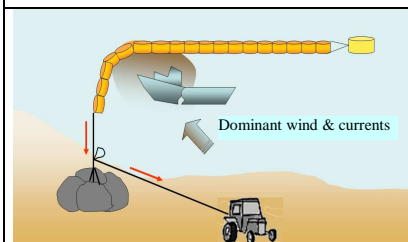


CONTAINMENT AT SOURCE FROM LAND

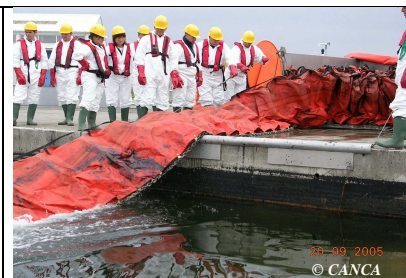
SCOPE

Pollution: all types
Pollutant: fluid to highly viscous
Coast, harbour area, inland waters



© Cedre
Containment in front of a sewer

Using a tractor to tow a boom



© CANCA
Deploying a boom from the edge of a quay using a boat

EQUIPMENT NEEDED

Response equipment: floating boom, ropes and chains, anchors and buoys, sinkers and mooring buoys or stakes.
 Vessels (barge, small tug...), shore equipment (public works equipment, tractor)
 Extra equipment: gas meters, walky-talkies, VHF sets ...

DESCRIPTION/PRINCIPLE

In the event of an accidental spill (hole in the hull of a stranded vessel, for instance), containment operations will have to be conducted as close to source as possible in order to limit the extent to which a slick can spread. Depending on weather and ocean conditions, accessibility and available resources, the aim will be:

- to contain the oil entirely: by surrounding the offending vessel with a floating boom to contain the oil providing there is enough floating boom available (cf data sheet "*Containment in harbour areas*"),
- to contain the oil partially around the source of the spill (by using wind and current) if there is not enough boom available.

In which case, proceed as follows:

- as far as possible, the beach or the banks must be protected (cf "*P05 Protection par tapis de rive*" and "*P06 Protection à l'aide d'absorbants*" both in French version) ;
- transport (paying attention to site accessibility), prepare and assemble the lengths of boom needed for conducting containment operations;
- launch the boom and pick up the towline with an appropriate boat depending on tide and current factors ;
- surround the spill source partially or entirely (stranded vessel, ...). Comply with boom positioning rules into the current (cf "*Protecting sensitive coastal areas using deflection booms*");
- connect the boom to the near shore anchoring points simultaneously. Possibly tie the other end of the boom to an anchoring point ashore. If the area is sensitive to tidal action, make allowances for current reversals using twin anchors and bearing in mind possible tidal effects.

A containment operation will always have to be followed by recovery, waste storage and transfer operations. The pollutant will have to be recovered without delay before the recovery storage capacity becomes saturated (to avoid leakages), especially when the weather forecast is bad or when there are continual beachings of pollutant.

CONDITIONS OF USE

Pollution: fluid to viscous pollutants. Precautions will have to be taken for volatile oils (such as petrol and diesel) because they are a hazard to responder health if breathed in, not to mention risks of fire and explosion (cf "Observations").

Site: coast or banks accessible from the shore

IMPACT ON THE ENVIRONMENT

Physical: variable depending on the mechanical resources used to stretch the booms and substrate stability.

Biological: variable depending on the sensitivity of the coastal area. Potentially, the impact can be very great on sensitive areas (marshes, mangrove swamps, river banks with plants and trees). Impact can be mitigated by installing protective systems for the river banks.

PERFORMANCE

Collected quantities: variable depending on response times and the extent of the spill, site accessibility, weather conditions and sea state, resources used. A well designed system will enhance containment-recovery and storage capabilities.

Implementation: variable depending on the type of boom (similarly when recovering crude oil)

Waste: pollutant, and possibly sediment and/or oiled vegetation and/or oiled floating waste.

OBSERVATIONS

- Decide not to contain and recover in the event of fire or explosion risks (oil with low flash point) and enhance evaporation and natural dispersion unless the slick seems to want to drift towards sensitive or built-up and populated areas. In this case, use booms to contain the oil and if possible use fire booms the spray low or average expansion foam to cover the slick and reduce inflammable vapours. Use spark proof equipment
- Such an operation is hard to conduct in choppy or very rough seas and on site too if there is a lot of current.
- Check that the boom is oiltight at the top end of the foreshore even during spring tides (a frequent mistake).