

PRINCIPLE OF INITIAL CLEAN-UP

SCOPE

Substrates : all types
Pollution : all types
Pollutant : fluid to highly viscous
Coastline



Manual collection – the Prestige spill



Mechanical recovery, the Erika spill



Pumping oil at the bottom end of the foreshore – the Tanio spill

EQUIPMENT NEEDED

Fluid oil: sewage suction systems / cleaning trucks / vacuum trucks, skimmers, skimming heads, pumps
 Viscous oils: - manual collection: shovels, forks, pokers, rakes, buckets, scrapers, etc.
 - mechanical collection: back-hoe loader, power shovel, grader, sand screener machine (highly viscous to solid pollutant).
 Storage facilities, personal protective equipment suitable for oil spills.

DESCRIPTION/PRINCIPLE

Initial response and clean-up (removing the bulk of the oil) aims at recovering as quickly as possible as much of the bulk pollutant as possible that could be remobilised and pollute other sites that are protected or that have already been cleaned up, pushed by wind and currents. Final clean-up and restoration should only start once responders are sure that there will be no more massive beachings of oil on the coastline unless weathering processes complicate the clean-up operation.

Priorities

Once responder safety is secured, initial clean-up techniques have been defined and accepted and limits have been set:

- for beaches: pump floating slicks by the water's edge and collect the biggest patches deposited on the foreshore to avoid them being covered by incoming sand or being moved out by wind and tide action. Collect polluted macro waste, heavily oiled seaweed and oil that is easy to recover in sheltered waters. Every response operation has to be as selective as possible to avoid disturbing the geomorphological balance of the coastline in addition to reducing quantities to be treated.
- for rocky areas: collect accumulated oil from nooks and crannies in rocky areas where there is little wave action.
- for quaysides and beach access roads: clean up whatever may cause people or vehicles to skid or slide or else cordon the area off.

Tar balls on beaches, slightly polluted seaweed, accumulations of oil in rocky areas where there is a lot of wave action can be removed subsequently during final clean-up operations.

Methods

In the event of liquid oils, contain the slicks and pump them with honey wagons/vacuum trucks and other specialised clean-up equipment (such as sewage suction systems and clean-up trucks) or else use specific recovery systems (cf. data sheets "*N02 Ecrémage / pompage en bordure d'eau*", French version, or for tropical areas "*MT05 Skimming / pumping at the water's edge*"). With oils that are viscous and unpumpable, recover can be done by hand (scrapers, shovels, forks, rakes, pikes, buckets) but when oil coverage is very extensive and the site is amenable (easy access and load-bearing capacity) access will be possible for heavy duty equipment (screening machines, back hoe-loaders, power shovels and graders). Public works equipment and farming equipment can be used for facilitating the disposal of collected pollutants. Vehicle circulation lanes and access areas have to be clearly marked out to avoid burying the collected pollutant or causing harm to the environment. To begin with, waste will be prestored near the collection points in tanks or ditches. These storage areas will be dug, lined and protected by plastic tarpaulin sheets and must not be reachable by the tides.

These prestorage sites also have to be easy to get to for the lorries that are to remove the collected waste. Be careful you do not overfill the storage capacities(skips, tanks) to ensure they do not spill over (cf. data sheet "*G08 Gestion des déchets*").



CONDITIONS OF USE

Pollution: massive beaching, heavy pollution, weathering processes may complicate the clean-up operations.

Substrate: sufficient load bearing capacity for men and machines.

Site: Access is suitable for the resources you are using and the site has been cordoned off.

IMPACT ON THE ENVIRONMENT

In a bid to limit the impact of clean-up operations on the environment (and especially erosion phenomena) you are advised to recover as little sand as possible when collecting oil and especially if you have to use public works equipment. Furthermore, access areas and circulation lanes have to be clearly marked out. Always use already existing access areas and marshal machines and responders accordingly. If need be, protect the ground from heavy traffic (use tarpaulins, geotextiles and wickerwork fencing).

PERFORMANCE

Yield: variable depending on the type of pollutant and the size of the spill (volume, surface area), what human resources and machines you have in addition to sea state and weather conditions.

Implementation: optimise the collection - transfer - storage - evacuation chain for transport to the treatment centre

Waste: pollutant + sediment + macro waste + soiled personal protective equipment+ waste water

OBSERVATIONS

- Bar access to the public so as to protect them and avoid disseminating oil elsewhere (burying, polluting surrounding areas...): set up signposts and posters that people can see and read.
- In the interest of safety for all concerned, vehicles and responders will use different circulation patterns and lanes.
- Solid preparation and good knowledge of the area will be the key to the success of the operation.
- Knowing what the oil is going to do next depending on weather conditions, sea state and tidal coefficients will always be essential to the overall strategy and response.