

### PRINCIPLE

This technique should only be carried out once the initial cleanup phase has been completed and the surfaces have been scraped. It involves washing oiled hard surfaces with hot water at high pressure and recovering the effluents.

Left: High pressure cleanup of a pontoon



Right: High pressure cleanup of a harbour wall



### CONDITIONS OF USE

- ✓ **Pollution:** thin layer; moderately to highly weathered oil
- ✓ **Substrate:** mechanically resistant surfaces (stones, rocks, ripraps, quays)
- ✓ **Site:** access possible for washing equipment.

Left: Clean water storage



Right: High pressure cleanup of a wall



### EQUIPMENT

- **Basic equipment:**
  - ✓ Hot water pressure washer
- **Extra equipment:**
  - ✓ Direct water supply at sea; seawater storage
  - ✓ Recovery: light containment boom, shore-sealing boom, planks, sorbents, skimmer, pump
  - ✓ Non-toxic washing agents (possibly) and spraying system (gardening type)
  - ✓ Geotextile.
- **PPE:** Overalls, oilskins, boots, gloves, protective helmet, goggles, and mask. Users are exposed to a lot of dirt, containing potentially toxic particles (spray).



- ✓ Assess the need to wash, taking into account the degree of pollution and the ecological sensitivity of the site, e.g. presence of lichen and vegetation growing in cracks
- ✓ Try different water temperatures (up to 90°C) and pressures (up to 150 bars), starting at low temperature and pressure. Adapt to level of oiling and solidity of the rock or structure
- ✓ Recover effluents using sorbents or booms and skimmers; protect the surrounding area using geotextiles
- ✓ When cleaning riprap, flood the structure continuously (see Datasheet n°13), to rinse the effluents out of it
- ✓ When possible, use hot water pressure washers which are suitable for seawater and can be easily transported. Rinse them with freshwater every day.
- ✓ Rotate users (on the following basis: 1 spraying, 1 monitoring machine and water supply, 1 recovering effluents)
- ✓ Plan for maintenance/repairs on site (1 mechanic for 10 machines)
- ✓ Try using hot water without high pressure
- ✓ Try cleaning without washing agent (non-toxic). Tests can however be carried out to assess the potential gain. The decision to use a washing agent (non-toxic) requires approval
- ✓ Spray the washing agent directly on the rock or structure, leave it for 15 minutes and then rinse.



- ✓ Don't uproot vegetation or scrape the soil in cracks
- ✓ Don't damage the site using excessive pressure/temperature
- ✓ Don't use a washing agent which is not approved.

### IMPACT

- ✓ **Physical:** possibility of impact on very crumbly rock; risk of landslide on fragile ground/cliffs (not to be carried out on crumbly cliffs)
- ✓ **Biological:** risk of sterilisation of surfaces and possibility of impact on surrounding sedimentary fauna.

### PERFORMANCE

**Yield:** varies depending on the site (a few m<sup>2</sup>/h per machine).

**Minimum workforce required:** 10 people for 3 to 4 machines (not including recovery of effluents).

**Waste:** liquid effluents; oil emulsified to varying extent, saturated sorbents, oiled geotextiles.

High pressure cleanup of riprap

