TG n°7 Intermediate and long-term storage sites location criteria

The table below provides considerations and criteria for intermediate and long term storage which will be required for major oil spills (adapted from Cedre and IPIECA).

Criteria	Intermediate storage	Long Term storage
Occupancy	• Plan on occupying for 0 to 1 year (more in extreme cases).	• Plan on occupying for up to 5 years. • There may be legal restrictions.
Example of storage capacities	• 1,500–3,000 m2 surface area. • Storage pits (100–200 m3). • Storage for debris, bags, barrels, tanks etc.	• 20,000–100,000m2 surface area. • Storage pits (1,000–10,000 m3). • Sorting, pre-treatment, stabilization.
Distance from recovery/ transfer sites	• Not more than 5 km if possible, 30 to 50 km maximum.	• Not more than 50 to 100 km; or one hour by road from previous storage.
Land conditions	• Flat and graded to accommodate settling tanks. • Rain runoff collection facilities may be required.	• Flat and graded to accommodate settling tanks. • Build appropriate rain runoff facilities.
Access and earthworks	• Access by heavy lorries necessary, plan for decontamination areas for the vehicles.	
Regulatory requirements	• Comply with local land occupation and environmental regulations. • Plan for long term availability and potential occupation.	
Hydrogeological conditions	• Load-bearing capacity must be adequate. • Impermeable subsoil, either naturally or artificially. • Avoid groundwater systems.	
Environmental conditions	• At a safe distance from populated areas (50 m or more). • Beware of the impacts of lorries. • Avoid protected areas, cultural or archaeologically sensitive sites.	
Management and maintenance conditions	• Supervise all traffic on site. • Track all waste. • Sort waste. • Assess quantities. • Organize final disposal contracts. • Water management. • Security to prevent unauthorized dumping. • Site restoration.	

Table 7: Choice criteria for intermediate and long-term storage sites

TG n°8 Intermediate and long-term storage sites management

The figure below provides examples of set up of intermediate and long term storage sites which will be required for major oil spills.

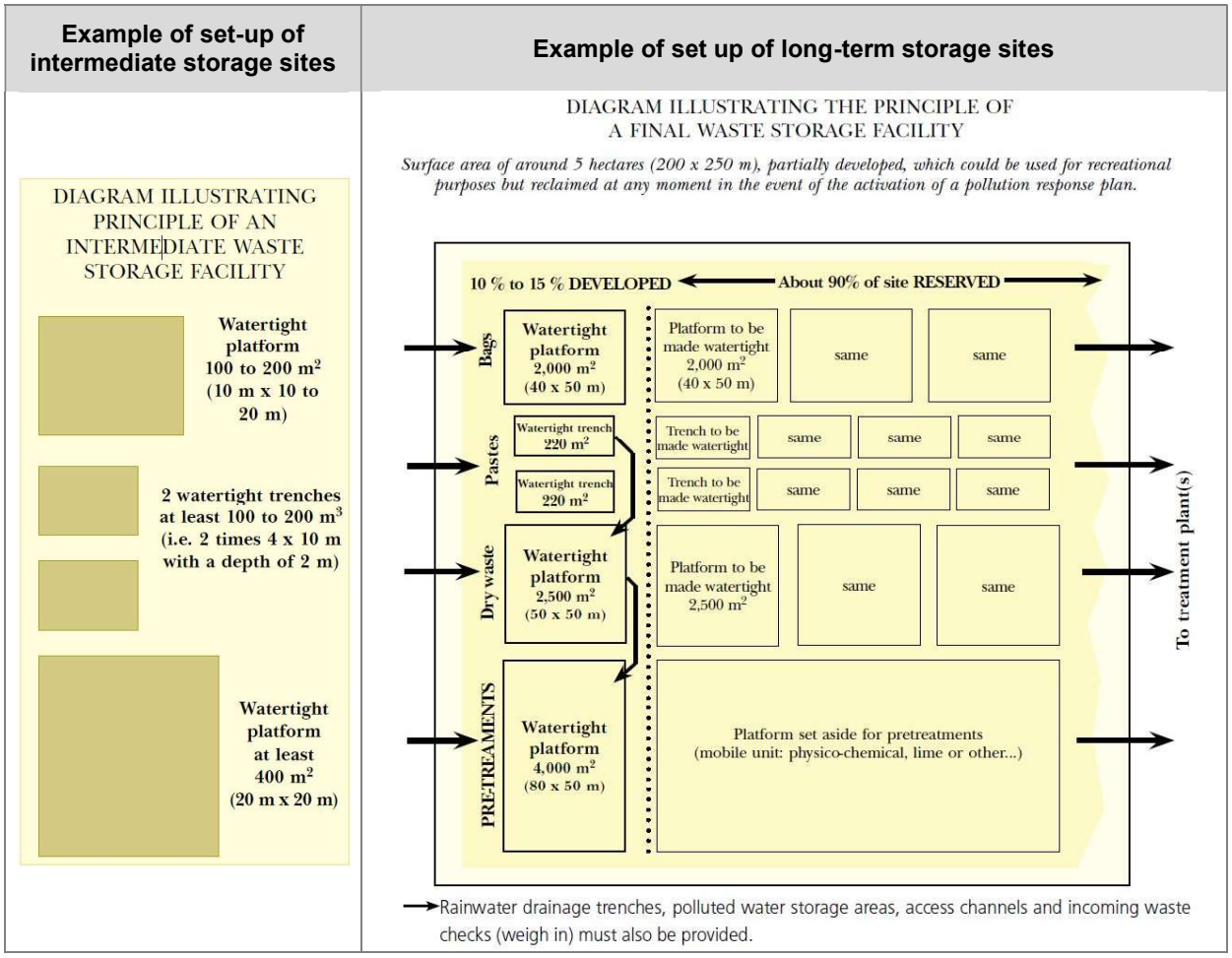

Figure 9 : Examples of set-up of intermediate and long-term storage sites

(Source: Cedre)

Recommendations for the protection and management of the sites are summarized below.
(Source: Cedre)

INTERMEDIATE STORAGE SITES

Protection

Keep damage and harmful effects to a minimum by taking the following measures:

- Protect the soil and subsoil.
- Organize drainage of seepage and divert run-off water.
- Set up a hydrocarbon recovery system by skimming or pumping.
- Implement a one way traffic system for machinery to facilitate operations and keep collision risk to a minimum.
- Signpost access roads and control entry to avoid polluting clean areas.

Management

Managing a storage site requires the following:

- Permanent technical supervision of the operations (quality control of incoming materials and their transfer, estimation of quantities and pollutant content, waste record logbook to report all movements and incidents.
- Watertight skips, containers, platforms or trenches for waste storage.
- Maintenance and surveillance of the facility (compliance with safety regulations, security and hygiene).
- Water management to avoid dispersion into the natural environment (run-off, seepage on site or off site if a storm-water tank is being managed).
- Organisation of waste transfer to a treatment plant or final storage facility, if activated, to avoid saturation.

LONG TERM STORAGE SITES

Protection

Careful site development and management will reduce risks of damage and harm to the environment to a minimum:

- Pits with guaranteed water tightness.
- Drainage system to channel seepage waters to a water treatment plant (oil-water separator, lagoon for run-off water and site drainage, outfall pipe controlling total hydrocarbon content).
- Cover (watertight tarpaulin, lid) for full storage facilities (pits, containers or skips) and channelling of run-off; vents to let any fermentation gases escape.
- Decontamination area for machinery.
- Regular checks using piezometers placed downstream of the site to ensure that the water management scheme is working correctly. A piezometer positioned upstream of the site will act as a control (standard sampling and testing procedures).
- Separate pits for waste with high and low pollutant content. If materials used on the worksite have not already been incinerated, reception platform for this waste (personal protective equipment, sorbents, oiled nets, etc.).
- Basins or tanks for liquids.
- Unpacking area (e.g. waste delivered in big-bags).

Management

Devise a traffic circulation plan to facilitate onsite movements and keep accident risks to a minimum, with signposting and regulation.

Set up permanent technical supervision of arrivals and departures:

- Identify pits.
- Check trucks using tracking slips and identify waste.
- Direct and supervise unloading.
- Keep a daily record book of all arrivals, departures and incidents.
- Inspect and maintain the facility (safety rules, supervision, and cleanliness).
- Ensure as many containers as waste categories are continually in operation and anticipate their duration in order to prepare to open new reception capacities where necessary.