

5.1.6. Salt leached caverns

Emissions from incidents and (major) accidents

By their intrinsic nature, caverns are by far the safest way of storing large quantities of hydrocarbon products. BAT for storing large quantities of hydrocarbons is, therefore, to apply caverns wherever the site geology is suitable. For more detail see Sections 3.1.17 and 4.1.15.3.

BAT, in preventing incidents and accidents, is to apply a safety management system as described in Section 4.1.6.1.

BAT is to apply, and then regularly evaluate a monitoring programme which at least includes the following (see Section 4.1.15.2):

- assessment of cavern stability by seismic monitoring
- corrosion monitoring, including periodic casing evaluation
- carrying out of regular sonar evaluations to monitor eventual shape variations, particularly if undersaturated brine is used.

Small traces of hydrocarbons may be present at the brine/hydrocarbon interface due to filling and emptying the caverns. If this is the case, BAT is to separate these hydrocarbon products in a brine treatment unit and to collect and dispose of them safely.

5.1.7. Floating storage

Floating storage is not BAT, see Section 3.1.18.

5.2. Transfer and handling of liquids and liquefied gases

5.2.1. General principles to prevent and reduce emissions

Inspection and maintenance

BAT is to apply a tool to determine proactive maintenance plans and to develop risk-based inspection plans such as, the risk and reliability based maintenance approach; see Section 4.1.2.2.1.

Leak detection and repair programme

For large storage facilities, according to the properties of the products stored, BAT is to apply a leak detection and repair programme. Focus needs to be on those situations most likely to cause emissions (such as gas/light liquid, under high pressure and/or temperature duties). See Section 4.2.1.3.

Emissions minimisation principle in tank storage

BAT is to abate emissions from tank storage, transfer and handling that have a significant negative environmental effect, as described in Section 4.1.3.1.

This is applicable to large storage facilities, allowing a certain time frame for implementation.

Safety and risk management

BAT in preventing incidents and accidents is to apply a safety management system as described in Section 4.1.6.1.