

Safety Guidelines and Good Industry Practices for Oil Terminals

Part 2: Technical and organizational aspects of safety

- 1. Design and Construction**
 - 1.1 Environmental Baseline and Impact assessment
 - 1.2 Facility Siting and Land Use Planning
 - 1.3 Safe Design
 - 1.4 Quality Assurance during Procurement, fabrication, installation and commissioning
 - 1.5 Hazards Management

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

- **Stakeholder mapping and analysis of stakeholder needs to enable effective communications (para 48) ?**
- **Licensing requirements and applicable procedures (1.1. to 1.5) ?**

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

→ **Establish the Environmental Baseline report
(1.1) ?**

An Environmental Baseline shall be established by the OT Operator and submitted to the CA, as part of the permit application.

The Baseline Report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities (decommissioning).

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

→ **Environmental Impact Assessment in a
transboundary context (para 28) (1.1) ?**

The EIA should address the potential physical impact of the OT on the physical and social environment and should be open for the general public and interested or affected persons to comment and provide input to the assessment and to comment on or object to the construction and operation of the terminal.

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

- **Land-use planning considerations in view of OT facility siting (para 26) (1.2) ?**
- **Feasibility Study (financial aspects & decision criteria): to provide in the construction budget the costs of measures to reduce risks (e.g., outsourcing experts, nondestructive testing, training & coaching, etc.) ?**

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

- **Inherent Safe Design and operation of OT installations according to GIP, while making maximum use of the most secure and certified equipment (1.3.3) ?**
- **Apply GIP for design of tanks, piping, valves, alarms, overfill protection and other control systems and instrumentation (1.3) ?**

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

- **Hazard and Risk Assessment addressing the risks for operating personnel and risks that go beyond the OT boundaries, e.g. by Process Hazards Analysis (1.5) ?**

- **Safety Report (incl. loss of containment scenarios and related preventive / mitigation measures such as overfill protection systems) (1.5.1) ?**

Safety Guidelines and Good Industry Practices for Oil Terminals

Checklist: Design and Construction

→ Apply the principles of
“design for decommissioning” ?

Safety Guidelines and Good Industry Practices for Oil Terminals

Apply the principles of “design for decommissioning” ?

The “design for decommissioning” proactive approach is recommended as GIP and specifies the application of general design requirements such as:

- Using materials that are easy to recycle or reuse.
- Using a modular design to make it easier to assemble, disassemble and transport parts of the industrial facilities
- Minimizing the use of hazardous materials.
- Minimizing the amount of contaminated material or hazardous waste that will be generated upon decommissioning.
- Using pollution prevention measures such as concrete areas , interceptors, containment, and liners to prevent or mitigate pollution from ongoing operations.
- Avoiding the installation of underground storage tanks containing hazardous substances, if possible.
- Considering the installation of double contained piping systems for extremely hazardous and toxic chemical piping systems.

Thank You for your Attention

