

---

**BAPE-2.15**

---

**Référence:**

2. La sécurité terrestre et maritime et la planification des mesures d'urgence

**Demande ou Question:**

- 2.15 Lors des audiences, une distinction a été faite entre une zone d'événements et une zone de conséquences. Le site de la zone d'événements inclut cinq composantes principales : le site d'amarrage, les bras de déchargement, la conduite ou ligne cryogénique, les réservoirs de GNL puis les système de regazéification. Si, par souci de protéger le marais et de s'éloigner des réservoirs de mazout existants, on devait repousser les réservoirs plus loin, la zone d'exclusion prévue devrait-elle accompagner la ligne cryogénique tout le long de son nouveau parcours ?
- 2.15.1 Quelles sont les prescriptions ou normes généralement reconnues à cet égard ? Existe-t-il des normes pour chacune des composantes identifiées ?

**Réponse:**

- 2.15 If the location of the tanks were to change, the exclusion zone would also have to be redefined. The redefinition of the exclusion zones would be largely a function of tank location but would also take into account any extension of cryogenic lines. Any prolongation of lines would also require new estimations to ensure that the most conservative exclusion zone considering all equipment is determined. Currently the conservative estimate is based on a 10 minute release of LNG from the cryogenic unloading line.
- 2.15.1 There are two standards that are used to determine exclusion zones. All five components mentioned in the question are addressed through these standards:
- 1) Exclusion zones determined by thermal radiation due to a fire and the movement of a vapour cloud originating from an LNG design spill as defined in CSA Standard Z276 (see Section 2.6.10 of the EIS).
  - 2) Exclusion zones determined by individual risk contours as estimated in the technological risk assessment.

The exclusion zones dictated by the CSA Z276 Standard are based on conservative assumptions and are enforced by regulation. Risk-based

---

**BAPE-2.15**

---

exclusion zones are identified to verify that the minimum requirement from the regulated standard (CSA Z276) is sufficient. The risk based exclusion zones takes site specific parameters into account such as meteorological data, possible release rates of LNG and safety barriers such as emergency shut-down and isolation valves.

The CSA Z276 Standard assumes a design spill with 10 minutes duration if shutdown means and isolation valves are present. The largest spill from any single line that can be pumped into the area with the container withdrawal pump at full rated capacity is assumed to determine the exclusion zone. Worst case meteorological conditions are assumed when applying the design code even if such conditions never occur.

The risk assessment shows that the exclusion zone determined by the CSA Z276 Standard is sufficient as it meets internationally recognized risk acceptance levels.