



Break-Out Session 2

LPG/LNG Inspection Focus and Techniques

Group 2

*Please save under a different name, e.g.
"Break-out Session 2_Group 2_Presentation"*

4. Findings from past LPG/LNG Inspections



PLANT INTEGRITY

Overpressure and containment

- **In most countries sites have to have pressure equipment and tanks certified** by 3rd parties, but inspectors also do visual inspections
- **ATEX gives many authorities a standard** for checking pressure equipment, if ATEX is their competence
- The authority may also require the operator to conduct a study of **whether the system has implemented adequate technical measures**

Site layout -Important for LPG plants because of the loading and unloading, Storage can be source of energy for fires

QUESTIONS

- Does the risk assessment take into account distances from tanks and pipes that could leak/rupture?
- Does the site plan reflect what exists actually on the site?
- Are storage limits and other site capacity thresholds respected?
- Does the storage layout allow adequate ventilation?

4. Findings from past LPG/LNG Inspections



PEOPLE

- **Ownership is not always clear**
- **Big LPG companies don't change staff often** so knowledge remains
- **Two groups of establishments** that inspectors handle differently
 - Big** installations (more knowledge)
 - Small** installations (less knowledge)
- **Truck drivers are not under the operator but do the most critical work**
- In some countries, **culture of operators motivates them to "protect" the site** from questionable or unknown drivers/behaviour

QUESTIONS

- How does operator ensure that drivers have the right competency?
- How do operator make sure drivers are adequately trained.
- Does the operator make sure the drivers know the layout of the site, where to park, speed limits?
- What if the driver does not speak the local language?

4. Findings from past LPG/LNG Inspections



INFORMATION TO THE PUBLIC

- **CY – Everyone in range of the scenario has to be in range of public alarm and communication,**
 - Also they **receive a “yellow box” with information** and radio (non-electric)
- **Some communities are very active in noticing smells, flares**
 - So **operators should be proactive about communicating to the authorities** non-dangerous situations that might affect the public
 - **Authorities can use social media** to communicate this information to the public

QUESTION

- How do you communicate to the public?

3. Technical Measures



OVERPRESSURE

- Independent overpressure controls, **some require two independent safety measures**
- Most authorities expects old tanks also to have 2 independent technical barriers

Overpressure, overflowing safety measures for storage, rail, road is mostly the same, often regulated by other legislation

- Storage uses flare for overpressure on a production site
- **Some countries don't require relief valves on underground storage tanks** - one less possible route of escape
- Rail wagons do not have safety valve
- Rail wagons do not often meet as high standards as on site

QUESTIONS

- If you have older tanks, what measures do you make them as safe as new tanks?
- How does the operator take care that the rail wagon or truck is safe when it comes on site?

3. Technical measures



INSPECTIONS – HOW OFTEN?

Pressurized equipment

- In some countries, pressurised tank inspection frequencies depend on the third party certifier.
- Other countries have statutory frequency (range 3-6 years and depends on conditions)

GAS DETECTION

- Most sites have gas detection, and in most cases it is required, except sometimes in cases where LPG is not the main activity