Safety Aspects

for

CGD Entities

Aavantika Gas limited

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Prevalent Safety Practices

- HSE Policy
- HSE Manual
- HSE requirement in Scope of work (Tender, Work Orders, Manuals)
- Permit to Work
- Hazard Identification & Risk Assessment
- QRA
- Safety Competency Training (STC)
- Personal Protective Equipment (PPE)

Prevalent Safety Practices

- Tool Box Talks
- Site Safety Audits
- HSE Reporting
- Periodic Review Meeting at Local/Corporate Level
- Mock Drills

Practices To Ensure Integrity Of CGD Pipeline Network

- Initial design specification
- Installation of valves at intermediate distances to isolate the pipeline section
- Round the clock pipeline patrolling
- ERDMP (Emergency Response & Disaster Management Plan)
- Emergency vehicle equipped with Tools & Tackles
- Emergency preparedness
- Public relation and information to public

Standard Operating Processes

- In-house development of standard operating process for CNG:
    - Operation of CNG station & equipments like Compressors, dispensers, LCV filling, Vehicle refueling, etc.
    - Preventive maintenance of compressors, dispensers, cascades, electrical panel, etc.
    - Standard formats & checklists for all O&M activities
    - Annual Operation & Maintenance plan

Standard Operating Processes

- In-house development of comprehensive PNG O&M Manual including SOP / work instructions / guidelines / checklists & formats for:
  - City gate station
  - Odorant handling
  - Steel / MDPE network maintenance
  - Customer complaint & request handling
  - DRS / industrial skids maintenance
  - Calibration / testing of SRVs, meters, etc.
  - Modification / rerouting of pipeline network
  - Safety inspection / audits equipments & customer connections
  - Technical guideline & checklist for new Industrial / Commercial / Domestic connections

Risks Involved with CGD

- A Natural Gas leakage without associated with fire from potential leakage sources e.g. flange and valves in the DRS, CNG stations (Cascade connections), Valve Chambers, MRS and customer premises.
- A fire/ explosion in the gas leak
- A leak from the main Steel pipeline section (15-25 bar pressure) could be well damaging and requiring quick isolation of gas supply.
- Any third party damage of the pipeline section requiring isolation.
- Any fire in customer premises
- Total or partial blockage of pipeline.
- Third party Pipeline damage requiring system pressure reduction/stoppage of gas supply.
- Preventive shutdown action during any Natural calamities, e.g. flood, earthquake, epidemic, storm etc.

Mitigation Measures

- **On site emergency plan**: A responsive plan to contain and minimize the effects due to emergency within the installations

- **Crisis management plan:** A well coordinated comprehensive response plan to contain crisis that has a potential to cause loss of life, property, environment and provide speedy and effective recovery by making the most effective use of available resources.

- **Off site emergency plan:** A responsive plan to control/ mitigate the effects of catastrophic incidents.

  This is prepared by district management based on the data of the installation(s) given by all the owners

PNGRB issued Guidelines / standards on Safety

- Technical standards & Specifications including Safety Standards for City or Local Natural Gas Distribution Networks – 2008
- Technical standards & Specifications including Safety Standards for Natural Gas Pipelines– 2009
- Code of practice for quality of service for City or Local Natural Gas Distribution Networks – 2010
- Codes of Practices for Emergency Response and Disaster Management Plan (ERDMP) – 2009

THANK YOU