



Workshop on Capacity Building of Third Party Inspection Agencies

New Delhi Feb.24, 2025





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Company Profile



Company Profile

Root Thinkers was established in the year 2013 as a Private Limited Company under the Indian Companies Act 1956 by four experienced professionals from the Oil & Gas Industry, who then enrolled highly experienced Associates from the Industry.

The objective of forming the company was to assist and serve Oil and Gas Industry, utilising the experience and exposure of the Directors and Associates.

Since, these professionals had manned positions from grass root level to heading units, functions and businesses across the Industry, the company today holds an inherent strength of relevant and indepth understanding of the Industry .



ROOT THINKERS PRIVATE LTD.



Jobs Undertaken



Works undertaken / In progress since Inception

Since grant of Accreditation by PNGRB, following ERDMP Certification jobs were undertaken / are in progress

- **LPG Storage and Bottling Plants**
- **POL Installations / Coastal Locations & Depots**
- **City/Local Natural Gas Distribution Facilities**
- **Lube Plants**
- **LPG Cross Country Pipelines**
- **Gas Processing Plant**
- **Aviation Fueling Stations**
- **Road Transportation of**
 - **LPG Bulk & Packed**
 - **POL Bulk**
 - **Lube Bulk and Packed**
- **Dispensing Stations/ Retail Outlets**

Nos of Certificate Issued (Since inception) / In progress : 169 / 4



Works undertaken / In progress since Inception..Cont.

Since grant of Accreditation by PNGRB in the year 2023, following T4S Audit jobs were undertaken / are in progress

- LPG Storage and Bottling Plants
- POL Installations / Coastal Locations & Depots

Nos of jobs completed (Since inception) / In progress : 8 / 1





OBSERVATIONS / FINDINGS



Significant Observation (LPG / POL Locations)

- ERDMP : Consultants are engaged for it's preparation {Lack of Ownership, Responsibilities not gets sinked in / understood / taken seriously}
- RIA / HAZOP: All Emergency scenarios not considered and their impact not understood (Thermal / Pressure Energy Envelopes).
- Contract Engineers / Staff : Inadequate Training / Knowledge, Capability / Awareness to handle Emergency observed to be Poor
- Work Permit System : Hot work being carried out without Permit / Receipt acknowledgement by the executor / Renewal / Mandatory Facilities (Running Water Hose / F.E. etc) / Closure
- Offsite Drills not being Carried out Annually



Significant Observation (LPG / POL Locations) ...Cont

- Facilities are being provided to meet Mandatory Requirements without fulfilling intended purpose
 - HVLR Throw not reaching top of the tanks
 - SOPs : Illegible / wrongly positioned
 - Access Control System not functional
 - Unmanned multiple access to licensed Area
 - GMS : Variations / Deviations not analysed

- Operations Maintenance Practices : Lacks Clarity / Not Implementation e.g.
 - “C” & “D” Checks of Diesel Engines not being Carried out
 - Statutory / Periodic Testing Checking of following not regularly carried out ;
 - # Product Pipelines / Fire Water Ring Main
 - # F.Es, CO2 Cartridges (Wt beyond +/- 10 %)
 - # Foam Pourers / Sprayers (Tanks / LPG Bullets)
 - # Hoses Testing
 - # Carousel LPG Hoses (Continuity / Permanent Elongation in particular)
 - # Test Report are simply filed without scrutiny / analysis



Significant Observation (LPG / POL Locations) ..Cont

- Improper Handling / dumping of LPG Cylinders
- ECC : Concept Diluted
- Checking of TTS/ TLs : By Security Personnel only (Not taken seriously)
- Manning of MCC : Non Qualified / Certified Contract Electrician



Significant Observation...Cont



LPG/ Ethanol/ POL/ Petro-Chemicals Lorries :

- Training under Motor Vehicle Act :Though Licenses are endorsed for carrying Hazardous Goods but majority of the cases no actual training imparted by Certifying agencies
- TTs / TLs Crew : Not fully aware to handle Emergency / Disaster enroute. {Awareness Poor, Cleaner not found in most TTs, F.Es (ineffective), Mobile Operations, Emergency Kits though available but not aware of functions.}
- TREM Card : Route Maps and Contact Details of enroute locations / Mutual Aid Members / Associates not available
- Earthing / Bonding (particularly during U/L) not seriously implemented
- Ethanol/ POL/ Direct Sales TLs : No agreement for handling Emergencies enroute
- Ethanol/ POL/ Petro-Chemicals Lorries Hoses not being Tested
- VTS : Provided but no study / action on deviation



Significant Observation (Dispensing Stations)

- ERDMP Plan : Lacks seriousness, Not given due importance.
- Mock Drills : Not Conducted
- Training : Poor Awareness of Staff particularly of Contract Labour
- Maintenance/ Operations : Breakdown Maintenance except LPG / CNG Dispensing facilities. F.E (Annual Maint by Contractor),
- No Bonding while unloading POL / LPG TLs, Earth Pits – Depleted,
- TL Unloading Hoses / Dispenser Hoses / Product Tanks/ Pipe Lines – Not being Tested
- SOPs / Display of signboards – Serves Statutory Compliance, Issues – Legibility / Location
- No Mutual Aid Arrangements
- Statutory Approvals/Renewals : Found Wanting





WAY FORWARD



- Surprise Audit be conducted for ERDMP Certified /T4S Audit Locations in the intervening period to ensure that Safety Norms as stipulated at the time of ERDMP Certification/T4S Audit are observed
- Like T4S Sector specific Check Lists be prepared for ERDMP Certification also
- In majority of the Locations ERDMP is prepared by third party agencies and contents/ responsibility are not sinked in the plant personnel : PNGRB to take up with the agencies adequately





RECOMMENDATIONS

(PNGRB Interventions)



1. PNGRB Requirement of 1 Supervisor and 5 Inspectors in each of the eight Stream / Sector for all the IBs even with 2-3 stream eligibility will require around 20 Supervisors / Inspectors on Roll for each of the 30 IBs
 - In the current market scenario the rates have come down drastically low (Becoming unviable/uneconomical for small enterprises)
 - With the current level of work for most of the IBs it will not be possible to retain them (They will go out of Business)
 - Availability of Experienced Supervisors / Inspectors particularly in CGD, PPPL, NGPL, LNG restricted
 - PNGRB is approving the Audit Team and hence the requirement on Roll may be dispensed with

2. Past designation of the Team Lead : Preference to be given to experience (Most of the Ex EDs/GMs does not seem to be interested to work at the current going rate)





3. Handling Ethanol, POL and Petro - Chemicals TLs Emergencies
Enroute : Industry Understanding of handling LPG TLs Emergency may be extended to these TLs also
4. To enhance the quality of ERDMPs / Checks on IBs PNGRB is requested for :
 - 2 Step up Surprise Audit
 - Submission of Audit Trail for randomly selected locations
5. Like ERDMP for ISO Approval also witness audit (under NABCB) shall be conducted only in one streams





THANKS