

GSPC Gas/GGCL July 17,2014, GTI, Noida





`We believe that all accidents are preventable` &

`HSE delivers business value`





# **HSE Policy driven system**

Policy sets the priorities

<u>Policy implementation is monitored by Policy implementation</u>
<u>frame work which is the agenda item of Group HSE</u>

<u>Committee</u>





#### GSPC Group HSE Policy

#### GSPC Group is committed to:

- 1. Compliance with all the relevant legal requirements including regulations, standards and codes of practices for Health, Safety and Environment and shall practice high level of standards that reflect commitment of the group companies towards HSE in the entire hydrocarbon chain of activities including exploration, production, LNG, transmission, distribution of Natural gas and power generation.
- Use right kind of materials, technology (Design / Engineering) and energy efficiently to 2. protect life, property and environment.
- Provide necessary PPE's and Safe Operating Procedures, safe processes by identifying 3. and mitigating all possible risks, related hazards to its employees including travel management and assets to carry out required tasks with no injury to any personnel.
- 4. Promote HSE culture through clear communication to all its employees, stake holders, contractors, service providers, visitors, public by mentioning about their obligations for achieving the objective of the policy.
- 5. Ensuring the practice and implementation of the policy by the way of effective monitoring, review, audit and sharing of information across the group.
- Promote and adopt HSE culture at all levels in all the group companies by providing 6. qualified resources, training the employees regarding HSE awareness, skill and competency enhancement.
- 7. Systematic approach in HSE management to ensure continuous improvement.

Date: 1" January 2014

(Managing Director)

























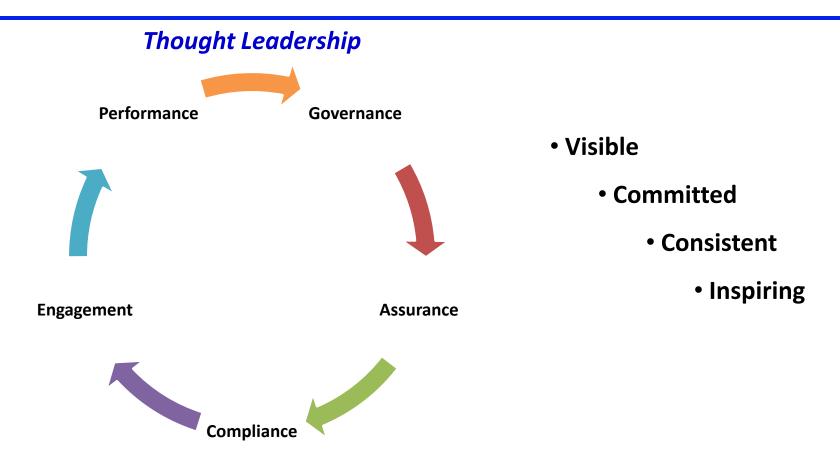
- HSE Management at GSPC Gas/GGCL.
  - HSE Policy
  - HSE Manual
  - HSE Organization
  - HSE Training and Competency
  - HSE Awareness among all stake holders
    - Focus is on Gas Safety
    - Focus is on developing Safety Culture within organization & within Contractors
    - To increase risk perception of field staff.











Safe and Sustainable Business





- HSE Leadership & Commitment
  - HSE Committee Chaired by Head of the Organisation
  - HSE Tours at regular frequency by Senior Management & Managers at all levels
  - Regular HSE Engagement meetings with key contractors
  - HSE First in all business meetings
  - Lead the periodic HSE Campaigns
  - Lead the investigation of all significant incidents
  - Lead Table top & Mock drill exercises
  - Lead the incident management
  - Monthly review of HSE performance, incident analysis & review of incident findings



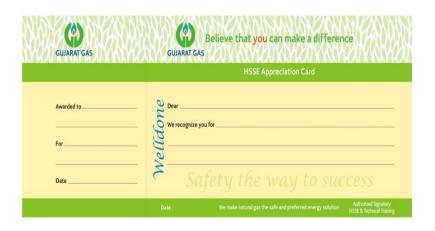


#### HSE Organization

- Corporate HSE/AI Dept.
- Zone wise HSE Officers to support and facilitate the field activities.
- HSE Responsibility is with Line Managers.
- HSE Committees are functional at City Level, Zone Level, Corporate Level & Group Level.
- HSE Appreciation for best HSE efforts by employees and contractors.















#### HSE Manual

- In line with Integrated Management System (ISO 9001, 14001,OHSAS18001).
- Permit to Work System as per OISD standard.
- All PE/PNG/Steel & CNG Activities of Project/ Construction and Operations and maintenance are done as per approved procedures and work instructions.
- Asset Integrity Management is woven in to HSE Management Systems.
- O&M Safety is given highest importance.







#### HSE Training

- In-house and out sourced
- Calendar in place for the year
- Tailor made programs are done for critical activities like gas escape handling, emergency response, welding, CNG Operations, Permit to Work etc..
- STC (Safety & Technical Competency Assessment) process is followed for critical jobs.









- Safety Awareness among all stake holders
  - Village awareness programs
  - School awareness programs
  - Residential societies awareness programs
    - Leaflets on gas safety distributed among all domestic /commercial/industrial & CNG customers.
    - All electronic mediums are utilized for creating awareness among the stake holders









#### **Practices Followed - CNG Stations**



















- Customer lounge
- Guards for dispensers to protect from hit by vehicle while parking for filling
- Asking customers to get down of car/vehicle before parking for filling/ removing hazardous material from vehicle before taking it for filling.
- Cylinder hydro test expiry check & refusal for filling if found expired
- Working of breakaway couplings
- RTO registration for CNG
- STC process for filler men & operator training & competency
- Emergency response drills











CNG Station Operation













# જાહેર સુચના

- પેટ્રોલિયમ એન્ડ એક્સપ્લોસિવ સેફ્ટી ઓર્ગેનાઈઝેશન (પેસો) ના નવા નિયમ પ્રમાણે CNG સિલિન્ડરની ચકાસણી અને પરીક્ષણનો સમયગાળો પ વર્ષના સ્થાને 3 વર્ષ કરવામાં આવ્યો છે.
- ઉપરના નિયમાનુસાર ઉત્પાદન / છેલ્લે કરેલ ટેસ્ટીંગ તારીખથી દર 3 વર્ષે CNG સિલિન્ડરનું પ્રમાણિત એજન્સી હારા હાઈડ્રો ટેસ્ટીંગ કરાવવું ફરજીયાત છે.
- 3. હંમેશા RTO માન્ય CNG કીટ અને "પેસો" દ્વારા માન્ય સિલિન્ડર વાપરવાનો આગૃહ રાખો.
- ૪. દરેક CNG વાહનમાં "Compliance Plate" હોવી ફરજીયાત છે.
- પ. વાહનની RC BOOK માં CNG અંગેની નોંધ કરાવવી.

નોંધઃ ભારત સરકારના નિયમો અનુસાર કંપની હારા ચકાસણી દરમ્યાન જો વાહન ચાલક જરૂરી ટેસ્ટ રેકોર્ડ રજૂ ના કરી શકે તો કંપની CNG ભરી આપવા બંધાયેલ નથી.





#### CNG Compressor area

- SRV Calibration & testing on periodic intervals
- Maintenance of Compressor as per Manufacturer's instructions
- CO2 flooding system to keep fit for the purpose always
- Maintenance of Fire Extinguishers
- Maintenance and Calibration of Gas detection system periodically
- Training of operators/supervisors on Emergency handling through STC process









## **Steel Pipelines - Practices**





- Corrosion monitoring
- Patrolling
- Valve Maintenance
- Markers
- Warning boards
- Risk based Integrity inspections & audits
- Condition monitoring inspections
- Public awareness



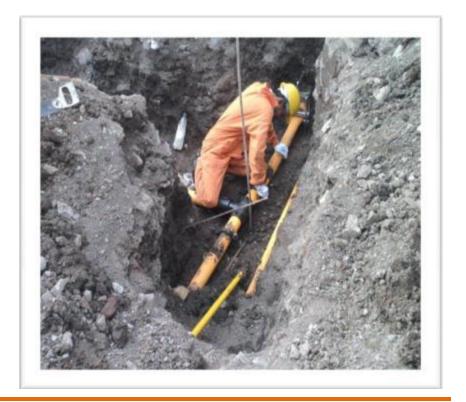






# PE Pipelines Practices Followed









- Utility Coordination Meetings
- Dial Before Dig Campaign
- Protection of Service Regulators from vehicular or other damages
- Markers
- LDT/LPT on periodic intervals
- Festival Safety Diwali & Holi

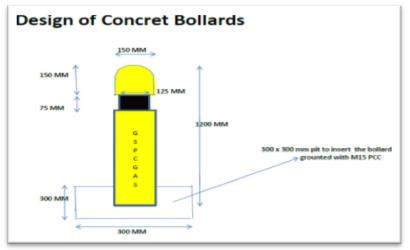


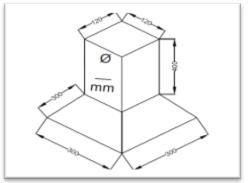


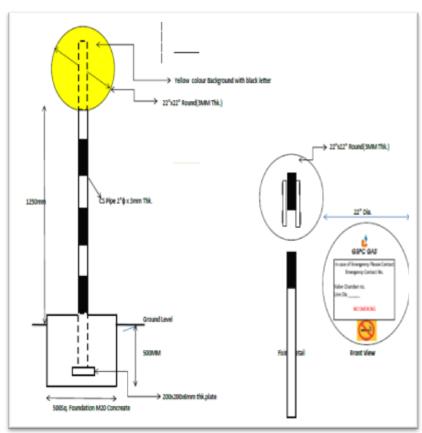




#### PE Pipeline protection mechanism



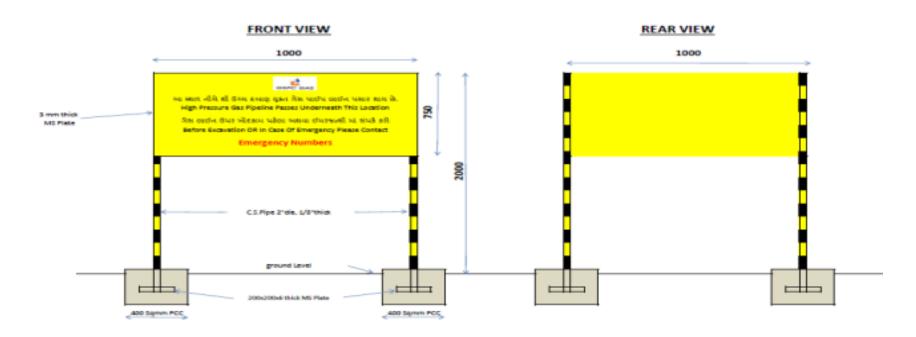








MP Line protection warning boards



DISPLAY BOARD HAVING INSTRUCTIONS AND EMERGENCY
CONTACT DETAILS





# Domestic Customer Safety Practices followed







- Recommended Position of geyser outside bath room and meters to be in open not in kitchen.
- Prevention of Third Party Damages efforts
- Closely monitoring for `Gas Ingress` issues
- Customer awareness Village awareness programs
- Concentration of EM in Gas monitoring periodically
- Community awareness through school programs, Society programs etc









#### **Emergency Response and Disaster Management**





- ERDMP for all installations developed and got certified by PNGRB TPIA.
- Level 3 mock drills organized at various zones.









#### • Level 3 Drills

















- Safety & Technical Competency [critical jobs]:
  - Safety training is given to all contractor employees.
  - It is ensured that Safety training is imparted to contractor workers, who are deployed on site.





Safety Training & Competency Procedure :















# Lessons to be Learnt (Safety Alerts to employees on incident learning):

- Preparation of Lesson learnt from detailed investigation & establishment of root causes for all significant incidents
- Sharing of the lessons through email communication, Tool box talk at sites,
   Performance review meetings
- Covers learning from Own incident & from Safety alerts of others organizations









Life Savers







- <u>Reflect experience</u> gained from incidents
- Simple but <u>non negotiable mandatory rules</u>
- The most hazardous activities in our business are governed by simple mandatory rules to help safe operation across organization
- Enable us to achieve goal of <u>Zero Injuries</u>













#### Challanges

#### **PNG**

- Commitment of utility companies and their control on contractors to prevent damages to PNG network
- Rat bite cases on PNG network
- Low risk perception across society

#### CNG vehicles of customers

- Periodic testing of CNG cylinders
- Periodic inspection & maintenance of CNG installation of vehicles





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