

## **Proposed Terms of Reference(ToR)for EIA/RA Study**

### **Project: Kandla-Viramgam-Gandhinagar-Sanand Pipeline section of Kandla Gorakhpur LPG Pipeline” Project**

The structure of the EIA report will conform to the “Generic Structure of Environmental Impact Assessment Document” given under Appendix III of the Notification Dated 14<sup>th</sup> September 2006.

To establish the baseline environmental status within the study area comprising the area falling within 1 km along pipeline route (500m on either side) and 10km radius around the pumping station, the following data generation/ collection, from primary and secondary sources, is proposed:

Identifying & evaluating potential environmental impacts that are consequent to the project facilities, carrying out consequence analysis of release of hydro-carbon to water-bodies etc. and recommend necessary mitigation measures, prepare EIA report covering all there relevant data on air, water, noise, land-use, temperature, available facilities , surrounding industries, place of historical importance, flora & fauna, water bodies, occupation, health, etc. of neighboring people etc. in accordance with the regulations of the concerned State PCB's, Notification of MoEF&CC, Gol as mentioned above and prepare an Environment Management Plan ( EMP).

#### **Risk Assessment:**

Identify the potential hazards, assess the impact of all probable accidental hazards and mitigation measures to reduce hazards of all the facilities, prepare RA report with mitigation measures & Disaster Management Plan ( DMP) .Risk analysis study shall comprise of, but not limited to:- Identification of risks by HAZOP/FETI approaches- Hazard analysis/damage model studies for the facilities, radiation effects etc.- Maximum Credible Accident Analysis bringing out type of fire hazards from the facilities, past accident analysis, risk factors, societal risk, Domino effects etc.- Observation of risk assessment study /recommendations.- Preparation & submission of onsite emergency plan / disaster management plan (DMP) for the subject pipeline, based on Risk Analysis and assessment

#### **Air Environment:**

- a) Meteorology: Recording of meteorological data continuously at three location for a post monsoon season for 3 months or 12 weeks.
- b) Air Quality: Locations selected in view of predominant wind direction, for a period of 3 months or 12 weeks, with a frequency of 2 days per week, to determine 24-hour average concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub> and CO.
- c) Noise: At pumping stations, eco-sensitive areas locations, 1 day at each location, in and around the complex, represent different area categories, for determining 24-hour Leq values of sound pressure level.

**Water Environment:**

- a) Hydrology: Ground and surface water hydrology in the study area.
- b) Water Use: Use of ground and surface water in the study area

**Land Environment:**

- a) Land Use in the study area
- b) Geology of the study area
- c) Soils: Characteristics of soils from locations in the study area, representing different land uses

**Ecology:**

- Terrestrial ecology: Listing of flora and fauna species, identification of common, endemic & endangered species.

**Social Environment:**

- a) Demography
- b) Socio-economics
- c) Traffic Density

The impact assessment and environmental management will emphasize on the following subjects.

1. Impact and control of process emissions and fugitive emissions
2. Construction phase impacts and environmental management
3. In-built pollution control measures
4. Solid waste collection, storage and disposal
5. Water conservation and wastewater treatment and disposal
6. Plantation and Green Belt Development
7. In-built safety features, prevention of associated risks and hazards
8. Risk Analysis, Emergency preparedness/ Disaster Management Plan

\*\*\*\*\*