

**Appendix G****Requirements for Hazard to Life Assessment**

1. The Applicant shall investigate alternative method to avoid the use of explosives. The Applicant shall carry out hazard assessment as follows:
  - (i) Identify hazardous scenarios associated with the use, transport and overnight storage of the explosives during construction of the Project with a view to determining a set of relevant scenarios to be included in a Quantitative Risk Assessment (QRA);
  - (ii) Execute a QRA of the set of hazardous scenarios determined in 1(i), expressing population risks in both individual and societal terms;
  - (iii) Compare individual and societal risks with the criteria for evaluating hazard to life stipulated in Annex 4 of the TM; and
  - (iv) Identify and assess practicable and cost-effective risk mitigation measures to demonstrate the compliance with the Risk Guidelines.
  
2. The Applicant shall investigate methods to minimise risks from LPG storage and high pressure town gas pipeline. The Applicant shall carry out quantitative risk assessment for each of the LPG facilities, i.e. a Potential Hazardous Installation (PHI), namely ExxonMobil LPG storage installation at Tuen Mun Area 44, and the LPG storage installation at Sam Shing Estate to address the associated risks with operation of the high pressure gas pipelines during construction and operation of the Project. The Applicant shall follow the criteria for evaluating and assessing hazard to life as stated in Section 2 in Annex 4 of the TM after taking into account the increase in number of persons / populations during construction and operation phases of the Project. The Applicant shall also note that there is a high pressure town gas transmission pipelines (running along Yuen Long Highway and across the Lam Tei East Interchange) in the vicinity of the Project. A quantitative risk assessment shall be carried out to address the associated risks with operation of the high pressure gas pipelines during construction and operation of the Project. The hazard assessment shall include the following:
  - (i) Identify hazardous scenarios associated with the on-site transport, storage and use of gas as defined in the Gas Safety Ordinance (Cap.51) at the LPG Storage Installations, i.e. the PHI, namely ExxonMobil LPG storage installation at Tuen Mun Area 44, and the LPG storage installation at Sam Shing Estate, and then determine a set of relevant scenarios to be included in a Quantitative Risk Assessment (QRA);
  - (ii) Identify hazardous scenarios associated with operation of the high pressure town gas pipeline and determine a set of relevant scenarios to be included in a QRA
  - (iii) Execute a QRA of the set of hazardous scenarios determined in (i) and (ii), expressing population risks in both individual and societal terms;
  - (iv) Compare individual and societal risks with the criteria for evaluating hazard to life stipulated in Annex 4 of the TM; and
  - (v) Identify and assess practicable and cost-effective risk mitigation measures to demonstrate the compliance with the Risk Guidelines.
  
3. The hazard assessment shall also include a cumulative risk assessment of the Project, through interaction or in combination with other existing, committed and planned developments involving hazardous facilities in the vicinity of the Project.

4. The methodology to be used in the hazard assessment should be consistent with previous studies having similar issues.