

Transmission Case Studies

Risk based quantitative integrity assessment



One of GL's clients operates four hazardous liquid pipelines located in high consequence areas, subject to pipeline integrity regulations established by the Railroad Commission of Texas, the State regulatory authority.

GL performed a risk-based, quantitative integrity assessment (Direct Assessment methodology) that proved to the Railroad Commission that the probabilities of pipeline failure were significantly low and more than acceptable by industry standards.

Based on the risk-based approach, GL verified that further assessment was not required for a period of time beyond that required by prescriptive regulations.

Benefits

As a result of this project, regulatory compliance was achieved, significant information gained about the integrity of their pipelines and more expensive assessment techniques avoided.

Independent review of the Corrib Pipeline



The Corrib offshore gas development in Ireland was planned to include a 9 km onshore pipeline section.

This gave rise to extensive opposition from local residents concerned with issues such as the very high design pressure and the transmission of "untreated" gas. The Irish Government commissioned GL to perform an independent safety review of the proposed design and operation of the onshore section to assist in resolving the concerns of the objectors.



The first step was to assemble a team to carry out a structured review process, the aim of which was to firstly identify all relevant documentation relating to the design, construction and operation of the onshore section of the pipeline and any associated facilities. Independent

calculations were carried out using our QRA models to assess the risk levels in the design. Following the publication and public presentation of a draft report further discussions were held with stakeholders before the final report was published.

This concluded that, provided the recommendations made were implemented in full, the pipeline design and proposed route should be accepted as meeting or exceeding international standards in terms of the acceptability of risk and international best practice for high pressure pipelines.