

Air Liquide Singapore Pte Ltd No. 24 Jalan Buroh Singapore 619480

### WORKING NEAR ALSg (SOXAL) PIPELINES

## 1. REQUIREMENTS ON THIRD PARTIES WORKING NEAR THE GAS TRANSMISSION PIPELINE

- 1.1 The works owner and contractor must inform ALSg (SOXAL) in advance of their intention to work in the vicinity of 5m within ALSg's (SOXAL) pipeline. Such works include those that are likely to affect the integrity of the pipelines.
- 1.2 The proposed work with construction drawings and method statements must be submitted to ALSg (SOXAL) for evaluation on the impact of the works on the pipeline. ALSg (SOXAL) will advise accordingly on the appropriate precautionary measures to be taken.
- 1.3 The works owner and contractor must obtain the drawings from ALSg (SOXAL). The drawings obtained are not to be treated as 'As-built' and 100% accurate. It is at best used for reference only. The contractor must conduct his own due diligence in locating and verifying the ALSg (SOXAL) pipeline. They are required to incorporate the pipeline into their construction drawings. ALSg's (SOXAL) drawings should be treated as confidential. Do not disclose or forward them to others.
- 1.4 No permanent structures shall be designed and constructed above ALSg (SOXAL) pipelines.

### 2. PRECAUTIONARY DURING WORKS

- 2.1 The works owner and contractor shall and must take all necessary precautions to prevent any damages to ALSg (SOXAL) pipelines during the construction stage. They must inform ALSg (SOXAL) before carrying out any excavation works near the pipeline. It is important to report all damages to the pipeline, its accessories and its coating to ALSg (SOXAL). Repair must be done immediately to prevent aggravation of corrosion to the pipeline at the location of damage and thus becoming a potential hazard.
- 2.2 Trial holes to prove the location of ALSg (SOXAL) pipelines must be informed and with the permit or presence of ALSg (SOXAL) personnel. The contractor's competent personnel shall supervise the excavation works, monitor closely the pipeline depth based on the surveyor's interpretation.
- 2.3 Excavators are only allowed to break the Asphalt Concrete Layers of the road surface. After removing the asphalt concrete layers, only hand excavation is allowed to be carried out to locate ALSg (SOXAL) pipeline.
- 2.4 Do not shift or remove warning markers indicating the existence of the ALSg (SOXAL) pipeline at site without ALSg's (SOXAL) approval. The contractor must protect them from being damaged or tempered. Additional temporary warning markers shall be installed to warn others of the pipeline's presence.

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- 2.5 For deep tunnelling and shaft excavation works, ground consolidation could occur due to ground water losses resulting in surface settlement. This settlement can potentially induce excessive stress on the pipeline. The contractor shall conduct mandatory risk assessment to assess the impact of tunnelling on the surrounding area. To monitor the surface settlement, surface monitoring points shall-be installed along the pipeline alignment at every 10m intervals for at least 100m pipe length from the tunnel or shaft. The settlement must be regularly monitored while excavation or tunnelling works are being carried out. А differential settlement of 20mm will require all parties involved to assess the ground consolidation and evaluate the need to implement measures to arrest the consolidation. A thorough stress analysis of the pipeline must be done by a Professional Engineer, if the differential settlements reach 60mm. Depending on the findings of the analysis, measures must be taken to relieve the pipeline from the stress.
- 2.6 For major works that span over a long period of time, the owner and contractor shall hold monthly meetings to update ALSg (SOXAL) on the progress and any changes to their works.
- 2.7 For any new development surrounding the ALSg (SOXAL) pipeline, the developer must inform the property owner on the location of the pipeline within their premises and draw up measures to prevent any possible damage to it. Pipeline within a fenced compound must be accessible to ALSg (SOXAL) for patrolling and any maintenance works as and when required.

### 3. EMERGENCY WORKS

When urgent works resulting from emergencies have to be done near the pipeline, the owner and contractor must **call ALSg (SOXAL)** at the 24-hour hotline **62653788.** 

### 4. ENQUIRIES

The above requirements are only stated in general. The concerned party must consult ALSg (SOXAL) on all works near the pipelines. ALSg (SOXAL) reserves the right to alter any stated requirements or impose additional requirements that are necessary depending on site conditions and type of work. All trial holes/ excavations/ pipe/ cable laying/ repair works must be applied through the following link: <u>https://www.alsgpipeline.com/</u>.

Manager, Pipeline & Industrial I.T. Large Industries Air Liquide Singapore Pte Ltd.

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