

Technical Requirements for Offshore Operations in the vicinity of pipelines

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1. Objective

The objective of this document is to specify the minimum technical requirements for any third party offshore activity in the vicinity of pipelines operated by Gassco AS. The vicinity of the pipeline is normally limited to 500 metres either side of the pipeline, and third party activity includes both permanent construction work and other 3rd party activity. The technical requirements described in this document shall be the basis for the requirements given in the specific proximity agreements between the parties.

Example of Offshore Operations in the vicinity of the pipelines are given, but not limited to the following;

- Anchoring of vessels and rigs
- Geotechnical investigation / seabed testing and sampling
- Drilling operations
- Permanent constructions, platforms, windmills etc.
- Permanent pipelines and / or cable installations (without crossing)

2. Validity and scope

The scope of this document is to summarise technical requirements for any offshore operations in the vicinity of the pipelines, including the following;

- Pre-lay / as-found requirements, including survey
- Installation / operational requirements
- As-built / as-left documentation

3. Definitions

Term	Purpose
Gassco AS	Pipeline Operator
3 rd Part	The Operator of any third party performing operations in the vicinity of pipelines operated by Gassco

4. Responsibility

Gassco's Vice President Transport Network is the owner of this document and responsible for updates and revisions.

5. Technical Requirements

5.1. General requirements

The purpose of these requirements are to specify details to provide sufficient safeguards for the pipelines and minimizing the risk imposed by the 3rd party.

It is the responsibility of the 3rd party to plan, design and perform the operation in order to minimize the risk imposed to the pipeline. Specific requirements may vary from case to case. Deviations from technical requirements in this document shall always be subject to Gassco approval.

In general, the following requirements are given for any 3. party activity.

- Pre-survey / as-found survey including relevant documentation of the pipeline to be performed by 3rd party prior to execution of the work
- Identification of the pipeline position.
- Online monitoring of the pipeline position relative to the 3. party activity to make sure a defined separation distance is kept during operation
- Heavy equipment shall be secured on deck during transfer over the pipeline. Lifting / launching of heavy equipment shall be performed at a safe distance from the pipeline.
- In case of anchor installation, a procedure for safe anchor handling in the vicinity of a pipeline shall be prepared and subject to Gassco approval prior to the operation.
- In case of temporary crossing of pipeline with anchoring lines, the anchor chains shall be replaced by fiber inserts with sub-surface buoys at a mutually agreed horizontal and vertical distance from the pipeline to avoid contact between the mooring line and the pipeline.
- In case of pipeline laying operations utilising anchored vessels, the minimum vertical separation distance between pipeline and crossing anchor chain shall be 50 meters if possible to achieve at given water depth. In shallow water depths, surface buoy connections may be utilised to achieve sufficient separation.

5.2. Protection of the pipeline / mitigating actions

The 3rd party shall prepare and present the proposed mitigating action to minimise the risk for the pipeline to Gassco for approval.

5.3. Pre-Lay / as found requirements

Upon request, Gassco can verify the affected pipeline location and supply pipeline condition details to the 3rd party. It is however the 3rd party's responsibility to check and verify the pipeline condition in form of a pre-lay / as-found survey of the pipeline and the surrounding area.

As a minimum, the pre-lay survey shall identify the following along the pipeline section affected by the 3rd party operation;

- Pipeline lay condition
- Pipeline burial depth
- Pipeline free spans, including height and length measurements
- Pipeline features
- Seabed features
- Pipeline longitudinal and transverse profiles relative to the seabed
- Any other observation of interest

The 3rd party shall if necessary adjust the planned mitigation based on the observations made during the pre-lay / as-found survey.

5.4. 3rd party offshore operations

The 3rd party operations shall be planned and executed to minimise the risk for the pipeline. Detailed procedures for safe operations shall be made by the 3rd party for Gassco review.

The 3rd party shall document the operations including the safety aspects and the monitoring activities in the procedures presented for Gassco approval.

5.5. As-built / as-left documentation

When relevant, each phase of the operation shall be documented by a survey. Survey reports shall be prepared for every offshore campaign.

After offshore completion, a final as-built / as-left survey shall be performed and all resulting survey data shall be compiled into one brief survey report applicable for the 3rd party activity.

Reports and corresponding charts shall be issued to Gassco according to the proximity agreement requirements.

The content of the documentation shall be in accordance with procedures prepared by the 3rd party and shall provide full documentation of the status of the pipeline, including;

- Pipeline lay condition
- Burial depth, if applicable
- Freespan height and length, if applicable
- Pipeline features
- Seabed features
- Pipeline longitudinal and transverse profiles relative to the seabed
- Digital terrain model consisting of maximum 0,1 m grid cells from pre and post survey activities
- Any effect made by the 3 party to the affected area / section of the pipeline
- Any other observation of interest

All data shall be reported in:

- Horizontal Datum ED50, UTM zone 31 or 32 or as otherwise instructed by Gassco
- Vertical Datum MSL

6. Notifications

Gassco, Asset Management will appoint one single point of contact for all technical communication. The 3rd party shall on a regular basis provide updates regarding vessel schedules and other activities.

A pre-warning of operation shall be given approximately 4 weeks prior to any offshore operation.

Four days prior to any offshore activity, Gassco Bygnes Transport Control Centre (TCC) shall be notified as follows with a short description of the activity, location and schedule.

Daily progress report shall be issued to TCC and to the appointed Gassco single point of contact for technical information during, and restricted to operations inside the defined vicinity of the pipeline.

Gassco Bygnes, TCC, attn. Shift leader.	
Telephone +47 52 81 28 95	
Fax + 47 52 81 29 47	
Email tcc@tcc.gassco.no	
In emergency situations, call TCC and company nominated contact person	

Figure 1 TCC contact information

7. References

Number	Procedure number	Title
/1/	CORP-749	Management system manual
/2/	AM-788	Risk Based Methodology for Integrity Assessment of Gas Pipelines
/3/	DNVGL-ST-F101	DNVGL standard: Submarine pipeline systems, October 2017 edition