

UNC 0XXX:

Proposed Amendment to Gas Quality NTS Entry
Specification at the St Fergus SAGE System
Entry Point



Proposer: SAGE North Sea Limited
Panel Date: Thursday 5th November

Why change?



- Proposer's affiliate SAGE North Sea Limited ("SNSL") co-owns and operates the SAGE Terminal at St Fergus
- SAGE Terminal processes and transports gas from some 40 different Shippers, from both the UKCS and Norwegian Continental Shelf
- Terminal throughput is now below original nameplate capacity and proposer plans to retire under-utilised equipment, including a CO₂ treatment train
- Proposed modification is to increase the CO₂ limit within the NEA from 4 mol% to 5.5 mol% (subject to an aggregate cap of 7 mol% total inert), necessary to retire the treatment train and associated utilities
- Proposer considers increasing the CO₂ limit (and for which there is precedent at St Fergus (ref: UNC 0607)) will be beneficial to the UK gas market as a whole

Assessment



- During normal operations, SAGE Terminal CO₂ content entering the NG is circa 3 mol% and predicted to continue falling toward 2 mol%
- Certain offshore Shipper unplanned events result in high CO₂ slugs arriving at the terminal, approaching 5.5 mol%
 - Estimated frequency 6 events per annum (95% confidence)
 - Duration typically 48 hours with a 48-hour notice period
- CO₂ is currently removed using energy intensive amine absorption technology within treatment trains
 - Relatively high O&M cost required to remove approx. 3,000 tonnes CO₂ per annum
 - Retiral of under utilised equipment will reduce terminal emissions by approx. 50,000 tonnes per annum
- Comingling with gas from the other St Fergus Sub-Terminals should maintain CO₂ content entering the NG below 4 mol%
 - Likelihood of coincident high CO₂ from neighbouring sub-terminal is considered very low, (estimated at 1 event every 5 to 10 years); mitigating measures may be implemented
 - Likelihood of sub-terminals inadvertently shutting down as a high CO₂ slug arrives at St Fergus considered negligible, (estimated greater than 1 event every 1,000 years)

Solution



- Proposed UNC Modification will increase the NEA CO₂ content from 4 to 5.5 mol% and enable the retiral of under-utilised and energy intensive equipment
- Co-mingling with gas from the other St Fergus sub-terminals should maintain gas entering the NG below 4 mol%
- Proposed modification is analogous to and consistent with previously approved UNC modification 0607
- Proposal extends the economic life of the SAGE catchment, and promotes effective competition and gas supply into the UK market through the development of remaining reserves and resources in both the UKCS and Norwegian Continental Shelf

Recommended Steps



- The Proposer recommends that this modification should be:
 - Subject to self-governance
 - Workgroup assessment to develop the modification for [6] months
 - Proceed to consultation