

UNC Workgroups 0498/0502 Minutes
Amendment to Gas Quality NTS Entry Specification at BP
Teesside System Entry Point
Monday 08 December 2014
ELEXON, 350 Euston Road, London NW1 3AW

Attendees

Les Jenkins (Chair)	(LJ)	Joint Office
Lorna Dupont (Secretary)	(LD)	Joint Office
Alice Mitchell	(AM)	Ofgem
Andrew Pearce	(AP)	BP Gas
Antony Miller	(AMi)	Centrica Storage
Daniela Protas	(DP)	DECC
David O'Donnell	(DO)	TGPP
David Reilly	(DRe)	Ofgem
Dennis Rachwal	(DRa)	National Grid NTS
Gerry Hoggan	(GH)	ScottishPower
Graham Jack	(GJ)	Centrica
Jeff Chandler*	(JC)	SSE
Julie Cox	(JCx)	Energy UK
Marshall Hall	(MH)	Oil & Gas UK
Natasha Ranatunga	(NR)	EDF Energy
Richard Fairholme	(RF)	E.ON

*via teleconference

Copies of papers are available at: www.gasgovernance.co.uk/0498/081214

Modification 0498 - Amendment to Gas Quality NTS Entry Specification at BP Teesside System Entry Point

Modification 0502 - Amendment to Gas Quality NTS Entry Specification at the px Teesside System Entry Point

The Workgroup Report (combined 0498 and 0502) is due to be presented at the UNC Modification Panel by 21 May 2015.

1.0 Introduction

LJ welcomed all to the meeting.

2.0 Review of Minutes and Actions

2.1 Minutes

JCx believed the report referred to on page 5 (paragraph 2) of the previous minutes was produced by EON, and not RWE. RF confirmed this and it was agreed that the minutes of 10 November 2014 should be amended accordingly.

With no other comments, the minutes from the previous meeting were approved.

2.2 Actions

0807: *'Rate of change' issues for operating equipment* - Consider providing examples or information where this sort of problem had been experienced/encountered before.

Update: JC advised no further data was available at present. Recognising the difficulties in obtaining relevant information from consumers, it was agreed that the action should remain open and that responsibility for this action should now be assigned to JCx in the hope that via the Energy UK membership she would be able to source further supporting information. **Carried forward.**

0808: CATS and TGPP infrastructure – Provide revised schematic to confirm how facilities will be configured, what will be upgraded and likely combined costs.

Update: DO reported that work was continuing and it will be provided at the next meeting. It was confirmed that amine units will not be used for H₂S removal - there is a separate system for this. **Carried forward.**

1101: DP to provide an updated set of slides to include information on the terminals that the new fields will feed and their development status.

Update: DP gave a short presentation on various developments, noting that these were not all proposed to come in through Teesside.

DO suggested that it might also be useful to know how many were in each location, e.g. Central North Sea, Gas Basin, etc. MH reported that the Government's Autumn Statement had now been delivered. The announcement of an Ultra High Pressure High Temperature (u-HPHT) cluster area allowance will foster and benefit joint or phased development of fields, potentially meaning that it is more likely that gas from other fields will also become available, and less likely that Jackdaw will deliver on its own. **Closed**

1102: JCx to provide some information on variation of gas quality and its effects on customers' plant and equipment.

Update: JCx gave a brief presentation, pointing out that consumers were having difficulty in providing information, and that these slides were based on quite old data (December 2005). The information was reviewed. JCx explained the fluctuations in gas quality were noted over very short periods (minutes); methane appeared to increase and ethane reduced in the overall specification.

Also included was a slide on gas quality after the fire at the Rough (February 2006) as this might be of interest; when Rough was not operating there appeared to be less variation in the CV, perhaps indicating that the non-storage supply was less variable. This may be of peripheral relevance to the modifications under discussion.

A discussion on the examples provided ensued. It was suggested that recent reliable data was required to identify any other such events and to establish/attribute the cause. It was observed that parties would not see a 4 minute change of CO₂ if the Jackdaw field was on, and DO explained why.

LJ commented that rapid change can cause a trip (variation of CV), and queried if it could be demonstrated through the flow information at Teesside that this did/did not happen through these flows. DO pointed out the need to understand what caused the methane/ethane variation, to understand what drove the issue - more than one example (recent) would be required. Noting that at the time it was a serious incident, JCx confirmed that she had not been able to source any further data.

LJ observed that unless it could be demonstrated that variations cause trips, then reliance on one incident for use in the Workgroup's report was not really sufficient data/evidence. JCX referred to previous papers that may provide evidence, but believed these were CV related rather than CO₂. MH reiterated the need for plant and offshore field reliability which would determine the quality of gas entering at Teesside; commingling happened

now, and there was no evidence to demonstrate that hour to hour variability close to/distant from Teesside will be a problem. It will all be diluted as it progresses through the systems. The reason for these modifications was not to accommodate an hour to hour variability but to make it possible to offer a wider tolerance at some periods.

LJ commented it could be rate or absolute that had caused the example trip; JCx said that it went outside of the tuned range according to the manufacturer's investigation. JCx gave more detailed explanation on the limits of equipment. DO observed that the peak efficiency range of compressors/turbines has to be greater than the NTS now, otherwise there would clearly be many more trips. LJ believed that because the two values are within the permissible limits it should be able to cope - it may be a rate of change issue; JCx believed it to be both rate and absolute. Unless a direct link could be proved it would be problematic to use/rely on this data in the report.

Example scenarios were discussed. JCx reiterated the need for parties to be able to anticipate any change coming so that they could deal with it appropriately. There may be a number of reasons for trips. If it could be predicted it could be better managed; the risk is when an asset operator has very little time to respond to variations. AMi commented that high CO₂ gas was harder to inject and storage operators would have to bear that cost.

MH indicated that REMIT provides a lot of information on fields and outages. Principle variation of quality of gas arrives from e.g. Norway and through connector flows; it was not coming planned/unplanned variations in UK fields. How did GB want to structure its market (ramp rates?) to address these other sources? More frequent and accurate informal flow of information could perhaps be encouraged and REMIT and other source flows could help. JCx asked if there was a forecast of gas quality (day before) that could be accessed.

LJ reiterated the question - do high/low absolutes or rates of change in gas quality cause trips? Inconclusive data on this means no resolution. DP asked if continental evidence was available. JCx believed it had been discussed under the Interoperability Code; rate of change was an issue and forecasting gas quality data was to be made available (Interconnectors only). National Grid NTS had been asked how it would deal with this.

LJ added that any other data that draws a link between change in gas quality and problems at the point of use would be welcomed for consideration. **Closed.**

1103: AH to clarify the cost implications of removing H₂S and CO₂ in regards to the August British Gas presentation.

Update: DO explained where in the process H₂S was removed; this process would not remove CO₂. DRe observed that if this H₂S removal process was already the subject of investment, then this cost should be removed from consideration of costs for CO₂ arrangements. DO was requested to clarify costs for H₂S removal have not been included in the CO₂ arrangements. **Carried forward**

1104: DRe to review the carbon assessment presentation and feedback whether the approach is appropriate in particular with regard to capital costs.

Update: DRe gave a presentation. There was a difference between the scope of costs included in a Cost Benefit Analysis (which may form part of the Workgroup report), and the scope of a carbon cost assessment. Ofgem did not consider that the carbon cost assessment should include the capital cost (and non-carbon operating costs) of CO₂ removal equipment in any scenarios.

However, the capital and operating costs of CO₂ removal equipment may be relevant to a Cost Benefit Analysis.

Various points to consider when looking at a carbon cost assessment were outlined, and DRe gave more detail on Ofgem's expectations in relation to each point. These were discussed, with DRe stressing the requirement for parties to provide consistency and transparency of information capable of easy comparison.

No carbon emissions have been abated. DO observed that any investment decision has to be made on the basis that gas can always be delivered. Carbon cost assessment and what was included was considered. MH asked was it tonnes per year increment or decrement - was this of any interest? MH was concerned if account was not taken of capital costs in a carbon cost assessment - if a party was spending money to abate emissions it should be clear. Total increment is a function of the volume and the field. There were estimates that Teesside will be responsible for 16-17% of GB gas in the future. There would be eventual field depletion and the amount of CO₂ associated with Teesside will therefore reduce over time.

LJ summarised that capital cost should be included where it was abatement; both assessments should be separate. It was asked if amine was an abatement exercise and this was discussed. It was concluded it was not abatement as it created more CO₂ in the removal process.

DRe summarised the need for consistent units and the ability to identify separate units for ease of comparison.

It was suggested that the Proposers and Ofgem meet to discuss in greater detail and reach a view on what was required. **Closed**

1105: AH/DO to rerun the calculations in the carbon assessment presentation based on an expected average CO₂ level and to include an option 4 based on information on typical average values to be provided by DRa.

Update: DO gave a presentation, drawing attention to various points/assumptions that should be borne in mind. A table illustrating annual CO₂ impact assessment - Total CATS flow, for scenarios 2 and 3, was displayed and reviewed.

The use of the Amine unit was discussed. It assumes circa 36 days per year when an Amine unit is required for use, but the unit has to be kept running on 'warm standby' throughout the year. GJ asked what would be the cost of *not* running the Amine unit every day.

DO gave the reasons for this practice; the alternative would be to run the risk of gas being refused entry by the NTS. The figures provided demonstrated that an Amine unit did not offer abatement. In its removal of 1 tonne it creates a third of a tonne. There were issues of reliability (restarting problems or total equipment failure) if turning off and on; if the Amine unit did not start, gas could not flow and the economic consequences to not flowing were probably much greater than running the unit for 365 days of the year. What this might mean in mcm terms was considered. The magnitude of losing gas on a peak day (e.g. January) was discussed. JCx believed National Grid NTS might have similar issues relating to its compressors but these were not kept continually running. What was the benefit/commercial risk of having to deal with (i.e. producer off) against other costs of dealing with the problem elsewhere? The CO₂ issue is a social cost/legislative requirement. What was the commercial benefit for UK plc? It was believed that both upstream and downstream analysis would need to be provided, in confidence, to Ofgem. The 'trade-off' needed to be understood better (downstream costs versus diversity of supply upstream) alongside the level/likelihood of risk(s).

DO added that he did not know of any Amine unit that ran on a stop/start basis, and would have to enquire if any ever did.

DO explained how the non-ETS consumption was derived, why it was a one year view (at the peak production of Jackdaw), and the sources used. LJ suggested that, given the amount of data presented during the life of this Workgroup, it would be helpful to have more detail/links to any sources/assumptions for inclusion in the Workgroup's report.

DO believed scenarios 2 and 3 to be realistic. **Closed**

1106: MH to provide some presentation slides summarising the position regarding the development of high pressure/high temperature gas fields.

Update: MH had submitted a briefing note on government policy and the wider developments of gas fields. The largest known reserves on the UKCS were two fields on the edge of the Central North Sea area (Jackdaw and one other). These fields and any related discoveries would be eligible for the u-HPHT cluster area allowance, and development of these fields was now under review (FID is expected to be taken on at least one field in 2015). Noting that there might be joint or phased ventures, MH would be very surprised if Jackdaw was the only field to be developed. Recognising that future developments might come from further discoveries, it was possible there might be a domino effect.

Looking at the two main fields under review, Jackdaw was the only field with the >2.9% CO₂ content; the key was to avoid excessive development costs to bring onstream. The new fiscal terms in place for this area were encouraging and de-risked some of the projects. The Central North Sea area potentially has the largest yet to be found resources. Having developed Jackdaw will help previously undeveloped u-HPHT parts, and these flows in turn will help to lower the CV.

JCx had concerns that the average would move up and the range would broaden; customers close to Teesside would see a wider range on a day by day basis, and this would give problems for gas generation plant.

MH observed that Norwegian marginal gas brought in through St Fergus and delivered to the NTS had a high CO₂ content/higher specification, and it would seem perverse if the same cannot happen here. The gas needed to be brought to market for a number of wider benefits to be realised for the UK.

DO confirmed there was a cost (not insignificant) to the provision of Amine units wherever they were located, and would present a substantial capital upload to what was already an extremely expensive development. When looking at investments at this level, incurring any sort of risk that gas may not be able to be delivered would be a very major issue for any Joint Venture Board members to take into consideration. MH added that the decisions made in respect of these UNC Modifications would carry significant ramifications for decision-making in the wider context.

GJ asked if this was being presented as such a low likelihood event, why is it such a big issue for developers of fields? **Closed**

1107: DP to report back on the policy decision regarding the driver for the development of the Jackdaw field and the alteration of the CO₂ limit.

Update: DP explained that DECC has not developed a policy position in favour of altering the CO₂ limit to drive the Jackdaw Field development; the policies to which MH had made reference are policies in support of the economic recovery of the UKCS, included in the Wood Review, which MH had offered to illustrate at this meeting (see, Action 1106 above). **Closed**

3.0 Development of the Workgroup Report

The draft Workgroup Report was reviewed onscreen.

Workgroup Assessment (Page 7 onwards)

Draft statements were discussed and what further information might be required; a number of observations and suggestions were made as the review progressed. Individual parties were tasked with confirming/providing additional information as appropriate, according to the Workgroup's view of what was necessary to include as supporting evidence in the Workgroup's report.

Action 1201: All parties to review the draft Workgroup Report (published at www.gasgovernance.co.uk/0498/081214) and what information they have been tasked to provide (see text/assignments in red, page 8 onwards), and submit their contributions to the Joint Office in advance of the next meeting (i.e. by 12 January 2015) for inclusion in the redrafted Workgroup Report.

Other thoughts voiced included the following, however it was left with the Proposers to decide whether to pursue these points within their analysis:

- Would 3.5mol% be a better solution that all parties can live with?
- Should headroom at existing points be highlighted?
- MH offered to establish what information was in the public domain regarding offshore developments- It was also suggested that it might be helpful to include an explanation of DECC's policy in relation to carbon reduction objectives.

3.1 Review of Relevant Objectives

To be discussed at the next meeting.

3.2 Consideration of Legal Text

To be discussed at the next meeting.

3.2 Recommendations (including additional questions for UNC Modification Pane consideration)

To be discussed at the next meeting.

4.0 Next Steps

At the next Workgroup meeting (21 January 2015) it will be the intention to begin to formally structure and shape the Workgroup's report, with the primary focus being on the outputs from Action 1201 and how these will inform the Workgroup's views and be translated into meaningful content.

5.0 Diary Planning

Further details of planned meetings are available at: www.gasgovernance.co.uk/Diary

Workgroup meetings will take place as follows:

Date	Location	Programme
10:00 Wednesday 21 January 2015	ENA, 6 th Floor, Dean Bradley House, 52 Horseferry Road, London SW1P 2AF (Room 4)	<ul style="list-style-type: none"> Assessment of responses to Action 1201 Development of Workgroup Report
10:00 Wednesday 25 February 2015	ENA, 6 th Floor, Dean Bradley House, 52 Horseferry Road, London SW1P 2AF (Room 4)	Development of Workgroup Report
10:00 Wednesday 25 March 2015	Elexon Limited, 4th Floor, 350 Euston Road, London, NW1 3AW (Pink Room)	Development of Workgroup Report
April 2015 (<i>date to be confirmed</i>)	<i>To be confirmed</i>	Completion of Workgroup Report

Action Table – Combined Workgroup 0498/0502 (10 November 2014)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
0807	07/08/14	2.0	<i>'Rate of change' issues for operating equipment</i> - Consider providing examples or information where this sort of problem had been experienced/encountered before.	Energy UK (JCx)	Carried forward
0808	07/08/14	2.0	<i>CATS and TGPP infrastructure</i> – Provide revised schematic to confirm how facilities will be configured, what will be upgraded and likely combined costs.	TGPP (AH)	Carried forward
1101	10/11/14	4.1	DP to provide an updated set of slides to include information on the terminals that the new fields will feed and their development status.	DECC (DP)	Closed

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
1102	10/11/14	4.2	JCx to provide information on variation of gas quality and its effects on customers' plant and equipment.	Energy UK (JCx)	Closed
1103	10/11/14	4.3	AH to clarify the cost implications of removing H ₂ S and CO ₂ in regard to the August British Gas presentation. <i>DO to clarify costs for H₂S removal have not been included in the CO₂ arrangements.</i>	TGPP (AH/DO)	Carried forward
1104	10/11/14	4.4	DRe to review the carbon assessment presentation and feedback whether the approach is appropriate in particular in regard to capital costs.	Ofgem (DRe)	Closed
1105	10/11/14	4.4	AH/DO to rerun the calculations in the carbon assessment presentation based on an expected average CO ₂ level and to include an option 4 based on information on typical average values to be provided by DRa.	TGPP (AH/DO)	Closed
1106	10/11/14	4.5	DP to provide some presentation slides summarising the position regarding the development of high pressure/high temperature gas fields.	DECC (DP)	Closed
1107	10/11/14	4.5	MH to report back on the policy decision regarding the driver for the development of the Jackdaw field and the alteration of the CO ₂ limit.	Oil and Gas UK (MH)	Closed

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
1201	08/12/14		All parties to review the draft Workgroup Report (published at www.gasgovernance.co.uk/0498/081214) and what information they have been tasked to provide (<i>see text/assignments in red, page 8 onwards</i>), and submit their contributions to the Joint Office in advance of the next meeting (i.e. by 12 January 2015) for inclusion in the redrafted Workgroup Report.	ALL Parties	By 12 January 2015 Pending