

**UNC Workgroup 0607S Minutes
Amendment to the Gas Quality NTS Entry Specification at the ST
Fergus NSMP System Entry Point**

Tuesday 25 April 2017

at Consort House, 6 Homer Road, Solihull B91 3QQ

Attendees

Rebecca Hailes (Chair)	(RH)	Joint Office
Helen Bennett (Secretary)	(HB)	Joint Office
Amrik Bal	(AB)	Shell
Andrew Pearce	(AP)	BP
David O'Donnell*	(DOD)	NSMP
Graham Jack*	(GJ)	Centrica
Julie Cox*	(JC)	Energy UK
Murray Kirkpatrick	(MK)	BP Gas
Phil Hobbins	(PH)	National Grid NTS
Richard Fairholme	(RF)	Uniper
Simon Bibby*	(SB)	Shell UK
Terry Burke*	(TB)	Statoil

*via teleconference

*Copies of all papers are available at: <http://www.gasgovernance.co.uk/0607/250417>
The Workgroup Report is due to be presented at the UNC Modification Panel by 15 June 2017.*

1.0 Introduction and Status Review

RH welcomed all to the meeting and suggested to the Workgroup that the main focus of the meeting should be to review the progress of the outstanding actions from previous meetings, in order to identify any further analysis requirements and inform the content of the Workgroup Report, and then to concentrate on adding to the Workgroup report as opposed to following the Agenda.

1.1 Approval of Minutes (22 March 2017)

The minutes of the previous meeting were approved.

2.0 Amended Modification (further background to the proposed change)

Refer to MK option to amend this modification noted under Action 0201

3.0 Additional Analysis

Ongoing analysis is being made. Refer to Actions 0108 and 0202 for update.

4.0 Assessment of operational risks (frequency of occurrence and the penetration into the NTS)

Discussed as part of the Review of Outstanding Actions.

5.0 Anticipated impact on gas quality

Discussed as part of the Review of Outstanding Actions.

6.0 Consideration of wider impacts/costs on various parties (including consumers)

Discussed during Draft Workgroup Report update and Outstanding Action Items 0301; 0302 and 0303.

7.0 Carbon Cost Assessment (draft)

Discussed during Draft Workgroup Report update.

8.0 Alternative options

No longer being considered.

9.0 Development of Workgroup Report

During a brief onscreen review of the draft Workgroup Report (version 0.5, dated 21 March 2017), RH focused attention on the latest round of amendments based on the output of various actions discussed at the meeting.

AB Suggested a change to the statement around impact on Consumers statement discussed, changing it to 'no immediate impact on Consumers' is a better form of wording, this is reflected in the draft Workgroup Report that is published here: <http://www.gasgovernance.co.uk/0607/250417>.

RH agreed to publish the draft Workgroup Report and requested that Workgroup Members view the draft and suggest any changes necessary or make comments for discussion at the next meeting. MK and PH have agreed to review the text around 'Impact on Customers' section.

Action 0401: RH to publish the Draft Workgroup Report. Workgroup members to review Draft Workgroup Report and suggest changes.

Action 0402: MK and PH to review 'Risk of setting precedent' in section 6 Impacts & Other Considerations.

10.0 Review of Outstanding Actions

0105: BP and National Grid NTS to consider if any adaptations can be made (from both an NEA change perspective and a change to operational procedures) to the operating arrangements between the terminals and the NTS, to manage out of specification gas resulting from an unplanned outage.

Update: Operational procedure solution: PH has agreed with BP and NSMP that this alternative solution will no longer be pursued, mainly because it would not give BP and NSMP the certainty they need to get the gas into the NTS.

PH and MK agree and confirmed they are no longer going to pursue this. **Closed**

SB asked if National Grid can agree to accept up to 5.5% CO₂ content in gas from NSMP under all circumstances, even if Shell were not flowing as a result of an unplanned outage, which is an extreme case. i.e. can NG admit 5.5% CO₂ into the NTS without it being blended within the St Fergus terminal with lower CO₂ gas. PH confirmed that the National Grid Asset Integrity work is investigating the impact of this.

Post meeting update: The National Grid Asset Integrity work is still awaited. It is possible that further analysis internal to National Grid will be required once those results and any consequences from it are received and understood.

JC asked for a recap regarding action 0105 which took place. JC asked that if there is no advance notification to Shippers of a higher CO₂ content, is there any reporting after the event? PH advised there are no plans to do this but will feed this request in to some already ongoing reporting analysis.

0106: BP (MK) to clarify if other gas quality parameters are affected (CV, Wobbe and Dewpoint).

Update: MK will report back to the May meeting regarding the outstanding question on Dewpoint from DOD. See also Action 0304. **Carried Forward.**

0108: *National Grid NTS to consider if an assessment of its operational risks is required* - PH and DB to provide a statement for inclusion in the Workgroup Report (if required).

Update: In response to a question being raised concerning the difference if CO₂ content of 4% was raised to 5.5%, PH advised that analysis will be looking at the impact of increase to 5.5%. DOD advised that under certain circumstances, it is possible that gas can enter the grid at St Fergus at more than 4%. This is work in progress, PH to report back to May meeting. **Carried Forward**

0201: BP (MK) to look to further explain the rationale behind selection of the 5.5% CO₂ level.

Update: MK provided material which has been added to the Draft Workgroup Report. RH showed the group the text provided.

MK took the group through the material, GJ suggested the point being made (that it is a proportionate response) is worth being referenced in the modification itself to provide further clarity on the rationale behind the selection of 5.5% CO₂.

MK has the option to alter the solution section in the modification.

When RH asked the Workgroup for comments on the Historic Operation Procedures and Flows at the Site, no feedback received. **Carried Forward**

0202: National Grid NTS (PH) to look to provide another 'worst case' scenario based on the Shell low flow period in June 2016 (using actual CO₂ data and NEA upper limits) and update the analysis to include the weighted average CO₂ positions and the max/min daily CO₂ levels.

Update: This action was partially fulfilled by the heat maps presented at the last meeting. PH is still awaiting the min / max data (from original analysis provided and being supplied by NG).

Carried Forward

0301: Joint Office to contact various consumers/groups for views on the impacts on them from this proposal.

Update: RH has contacted EIUG (Energy Intensive Users group) and MEUC (Major Energy Users Council) asking if they can highlight the modification to their members and consider responding.

JC asked if CIA (Chemical Industries Association) can be contacted in the same way.

PH has already contacted GNI and PTL (Northern and Southern Irish TSOs)

AB asked if the gas quality specification is the same in Ireland as here, to which PH confirmed it is very similar.

PH suggests the Distribution Networks (DNs) may need to be alerted too.

JC advised that there is a Compressed Natural Gas (CNG) Offtake in Lancashire that is used for refueling vehicles and asked if this will impact them? PH will make enquiries. **Carried Forward**

Forward

Action 0403: Joint Office (RH) will make contact with CIA. Pending

Post meeting update: Contact has been made. Closed

Action 0404: Joint Office (RH) will make contact with DN's in the context of historic HSE class exemption relating to oxygen flow for bio-methane. Pending

Action 0405: PH to assess impact on CNG Offtake. Pending

0302: RF to provide a statement from Storage for the WGR for next meeting

Update: RF has concluded that only Uniper have Holford Storage that would be impacted and will provide a statement for the WGR that will be on behalf of Uniper, unless Gas Storage Operators group want to add additional input. **Carried Forward**

0303: Elaboration on the 'Wider Considerations' part of the Workgroup Report and what would be included in this section. AB to provide some text for the Workgroup Report.

Update: Carried Forward

0304: DOD to seek a more detailed understanding of how the plant operates at the right Wobbe level and the effect on the CO₂ level – basically this is more about operating the plant to meet the 5.5%. **Ref Action 0104**

Update: Discussed in conjunction with Action 0106, DOD provided a response which is on JO website and is as follows:

The composition of export gas from St Fergus is monitored by the control room and procedures are in place to ensure the specification of export gas is maintained. NSMP is fully aware of the composition of commingled pipeline gas upstream of the terminal

and therefore we would be aware of higher CO₂ concentrations in FUKA pipeline gas well before such gas reaches the terminal (as we are today). If our pipeline operating model suggested that by processing such gas, the lower specification for Wobbe Index might be breached we would modify the operating conditions at the terminal (specifically levels of NGL extraction) to ensure that the specification for export gas is met. This can be done relatively quickly and well within the anticipated transit time of any high CO₂ gas present within the pipeline.

To answer the questions relating to CO₂ concentrations in liquids export and maintaining water dew point, we have run a number of HYSYS simulations with gas compositions up to 6 mol% CO₂. We can confirm that at higher concentrations of CO₂ within the pipeline gas the CO₂ content of the NGL does increase however in all modes of operation required to maintain the NTS gas specifications the CO₂ content of the NGL remains less than 0.001 mol% which is well below the specification limits for our NGL export. In theory, there is some impact on the water dewpoint of export gas through increased CO₂ content however, this is taken care of by the gas dehydration system and in all cases modelled the sales gas remains well within spec (by a margin of over 40 °C).

Closed

0305: PH to investigate as to what would the impact be on a “super TFA” request. **Ref Action:** 0105

Update: The impact on a ‘super TFA’ is no longer applicable as the operational procedure solution referred to in Action 0105 is no longer being pursued. **Closed**

0306: MK/DOD to provide a statement to put the new scenario in to context and/or explain why it is an extreme scenario that is unlikely to occur.

Update: MK provided some text for WGR in relation to the scenario PH provided at the last meeting regarding Segal low flows. RH showed the group the text provided.

Referring to the material provided for the Workgroup Report for this action by MK, JC highlighted the bottom paragraph within the newly added text from MK stating that it is showing that this modification is a commercial scenario.

There was discussion with regards to notifications to Shippers before a higher CO₂ content enters the NTS. **Carried Forward**

Action 0406: DOD/PH investigate that if there is a CO₂ content above 4% when the gas enters the NTS, can Shippers be alerted?

0307: SB to look at the low flow period (8 days in June 2016) to clarify the background to the event and how relevant it is to this analysis/development of further scenarios

Update: SB advised that the data presented at the last meeting were sales gas numbers rather than sales gas exiting the system and that they related to largest field Segal going down for maintenance, suggesting that as Segal is the biggest field in the system, it is a worst-case scenario.

PH advised that NG will take in to consideration the likelihood of blending on the day, asset integrity work is progressing at the moment.

AB asked PH that if this did have an impact on Asset Integrity who would meet the cost?

PH advised this would be reflected in the Charging Statement adding that if CO₂ is mixed with water there is a corrosion impact.

There is a risk when there is high CO₂ and water, these together could impact Asset Integrity.

AB suggested that Ofgem may have to do an impact assessment.

RF can provide email evidence of corrosion identified in Germany due to higher CO₂ volumes which caused the storage unit to shut down. Please contact RF if required.

Carried Forward

11.0 Next Steps

RH reminded the group that the Workgroup’s report is due for consideration at the UNC Modification Panel meeting on 15 June 2017 (submission date 02 June 2017).

At the next Workgroup meeting, the Workgroup will consider:

- *any amendments to the modification if provided (further background to the proposed change)*
- *additional analysis provided*
- *assessment of NTS operational risks*
- *anticipated impact on gas quality*
- *wider impacts/costs on various parties (including consumers)*
- *alternative options*
- *development of the Workgroup Report.*

12.0 Any Other Business

13.0 Diary Planning

Due to there being a clash with the next NTSCMF in May meeting, the Modification 0607s Workgroup meeting is now being changed to Monday 22 May 2017.

Workgroup meetings will take place as follows:

Time/Date	Venue	Workgroup Programme
10:30, Monday 22 May 2017	Energy UK, Charles House, 5-11 Regent Street, London SW1Y 4LR Room LG8	Amended Modification Review Outstanding Actions and Close Finalisation of Workgroup Report

Action Table (as at 25 April 2017)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
0105	27/01/17	4.0	BP and National Grid NTS to consider if any adaptations can be made (from both an NEA change perspective and a change to operational procedures) to the operating arrangements between the terminals and the NTS, to manage out of specification gas resulting from an unplanned outage. See Action 0302	BP (MK) and National Grid NTS (PH)	Closed
0106	27/01/17	5.0	BP (MK) to clarify if other gas quality parameters are affected (CV, Wobbe and Dewpoint).	BP (MK)	Carried Forward
0108	27/01/17	5.0	<i>National Grid NTS to consider if an assessment of its operational risks is required</i> - PH and DB to provide a statement for inclusion in the Workgroup Report (if required).	National Grid NTS (PH) and (DB)	Carried Forward
0201	28/02/17	2.0	To look to further explain the rationale behind selection of the 5.5% CO ₂ level.	BP (MK)	Carried Forward

Action Table (as at 25 April 2017)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
0202	28/02/17	10.0	To look to provide another 'worst case' scenario based on the Shell low flow period in June 2016 (using actual CO ₂ data and NEA upper limits) and update the analysis to include the weighted average CO ₂ positions and the max/min daily CO ₂ levels.	National Grid NTS (PH)	Carried Forward
0301	22/03/17	5.0	Joint Office to contact various consumers/groups for views on the impacts on them from this proposal. See Action 0402; 0403 and 0404	Joint Office (RH)	Carried Forward
0302	22/03/17	5.0	To provide a statement from Storage for the WGR for next meeting	Uniper (RF)	Carried Forward
0303	22/03/17	5.0	Elaboration on the 'Wider Considerations' part of the Workgroup Report and what would be included in this section. To provide some text for the Workgroup Report.	Shell (AB)	Carried Forward
0304	22/03/17	6.0	To seek a more detailed understanding of how the plant operates at the right Wobbe level and the effect on the CO ₂ level – basically this is more about operating the plant to meet the 5.5%. Ref Action 0104	NSMP (DOD)	Closed
0305	22/03/17	6.0	To investigate as to what would the impact be on a "super TFA" request. Ref Action: 0105	National Grid NTS (PH)	Closed
0306	22/03/17	6.0	MK/DOD to provide a statement to put the new scenario in to context and/or explain why it is an extreme scenario that is unlikely to occur. See Action 0404	BP Gas (MK) NSMP (DOD)	Carried Forward
0307	22.03.17	6.0	To look at the low flow period (8 days in June 2016) to clarify the background to the event and how relevant it is to this analysis/development of further scenarios.	Shell (SB)	Carried Forward
0401	25.04.17	9.0	RH to publish the Draft Workgroup Report. Workgroup members to review and suggest changes. MK and PH to review 'Impact on Customers'	Joint Office (RH) All	Pending
0402	25.04.17	9.0	To review 'Risk of setting precedent' in section 6 Impacts & Other Considerations.	Murray Kirkpatrick (MK) Phil Hobbins (PH)	Closed
0403	25.04.17	10.0	Joint Office (RH) will make contact with CIA. Ref Action 0301	Joint Office (RH)	Closed
0404	25.04.17	10.0	To make contact with DNs in the context of historic HSE class exemption relating to oxygen flow for bio-methane.	Joint Office (RH)	Pending

Action Table (as at 25 April 2017)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
			Ref Action 0301		
0405	25.04.17	10.0	To assess impact on CNG Offtake. Ref Action 0301	National Grid NTS (PH)	Pending
0406	25.04.17	10.0	To investigate that if there is a CO ₂ content above 4% when the gas enters the NTS, can Shippers be alerted? Ref Action 0306	NSMP (DOD) National Grid NTS (PH)	Pending