

**UNC Workgroups 0498/0502 Minutes**  
**Amendment to Gas Quality NTS Entry Specification at BP**  
**Teesside System Entry Point**  
**Thursday 04 September 2014**  
**ENA, Dean Bradley House, 52 Horseferry Road, London SW1P 2AF**

**Attendees**

Les Jenkins (Chair)	(LJ)	Joint Office
Lorna Dupont (Secretary)	(LD)	Joint Office
Andrew Pearce	(AP)	BP Gas
Andy Heppel	(AH)	TGPP
Anna Shrigley	(AS)	ENI
Antonio Ciavolella	(AC)	BP Gas
Antony Miller	(AMi)	Centrica Storage
Charles Ruffell	(CR)	RWEst
Colin Hamilton	(CH)	National Grid NTS
David Reilly	(DRe)	Ofgem
Dennis Rachwal*	(DRa)	National Grid NTS
Fergus Healy	(FH)	National Grid NTS
Francisco Goncalves	(FG)	Gazprom
Gerry Hoggan	(GH)	ScottishPower
Graham Jack	(GJ)	Centrica
Jeff Chandler	(JC)	SSE
Julien Quainon*	(JQ)	GDF Suez
Julie Cox	(JCx)	Energy UK
Kevin Brown	(KB)	Petronas
Kirsten Elliott-Smith	(KES)	Cornwall Energy
Lucy Manning	(LM)	Interconnector UK
Marshall Hall	(MH)	Oil & Gas UK
Natasha Ranatunga	(NR)	EDF Energy
Nick Wye	(NW)	Waters Wye Associates
Nigel Sisman	(NS)	SEC
Richard Fairholme*	(RF)	E.ON UK
Ritchard Hewitt	(RH)	National Grid NTS
Steve Nunnington	(SN)	Xoserve

\*via teleconference

Copies of papers are available at: [www.gasgovernance.co.uk/0498/040914](http://www.gasgovernance.co.uk/0498/040914)

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 20 November 2014.

## 1.0 Review of Minutes and Actions

### 1.1 Minutes

DRa had proposed the following changes to the minutes of the previous meeting.

*Pages 3, 4 and 14 - Action 0601(a)(ii) Update: "... Entry points suggested for analysis/comparison were Bacton, Easington, St Fergus, Barrow and Theddlethorpe and also the 3-2 Teesside sub terminals from BP."*

*Page 8 - Action 0605(b) Update: "NR suggested that more detail was required in relation to impacts on Moffat. DRa observed there were no modelled scenarios where Teesside gas is to flow to Moffat, so this had no relevance and offered to explain why he felt consideration of Moffat was not relevant."*

*Page 11 - Action 0806: DRa requested the deletion of this action, believing it to be a duplication of Actions 0601(a) and (b). He may be able to provide a percentage breakdown by terminal of actual flows for summer/winter (this data is already published but he could provide an extraction for the convenience of the Workgroup).*

The proposed changes were reviewed and accepted. It was agreed that the minutes of the previous meeting would be revised and republished. The minutes were then approved.

## 1.2 Actions

**0601: Issue 1: What is the impact on gas quality at the entry and exit points for a change in the CO<sub>2</sub> to 4% in relation to:**

- CV
- Wobbe
- Variability in h/d/w timeframes
- for operation (eg maintenance and performance).

**0601(a)(ii):** Provide historical/forecast data on gas quality at other entry points. DRa to consider if the following can be provided and analysed to produce comparisons with Teesside data:

- Entry Points: Bacton, Easington, St Fergus, Barrow and Theddlethorpe and also the 3 sub terminals from BP.
- Gas Quality Elements: Historic CO<sub>2</sub>, WI, and GCV.

**Update for 0601(a)(ii):** Following discussions under Action 0805, below, this Action 0601(a)(ii) was agreed closed and a new Action 0901 was created. **Action 0601(a)(ii) Closed**

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**0601(a)(iii):** DRa to consider analysing and comparing GCV for entry points on the East coast.

**Update for 0601(a)(iii):** Following discussions under Action 0805, below, this Action 0601(a)(iii) was agreed closed and a new Action 0901 was created. **Action 0601(a)(iii) Closed**

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**0603: Issue 3: What is the impact on OEM Warranties if increased levels of CO<sub>2</sub>/inerts are seen?** Seek views from Energy UK members, regarding volumes/types/ locations/limits. (JCx)

**Update:** JCx reported that there would be operational CCGTs that would be affected but that this information cannot be shared. It would be for individual parties to submit any views confidentially to Ofgem. Panel could ask for parties to consider this in the consultation. **Action 0603 Closed**

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**0605:** *Issue 5:* What is the local impact on the DN and NTS operators?

- a) Understand the network flow impacts (see the GrowHow representation) – in relation to pressure/volumes/CV shrinkage. (DRa)

**Update for 0605(a):** No further update had been received from the DNs.

Referring to the slide produced in support of this action, RH outlined the NTS assessment of the network flow impacts indicating that the pressure/volume impact was not considered to be material; for CV Shrinkage there was a risk of FWACV capping. In National Grid NTS' view (provisional) there was no significant increase in risk. JCx questioned the interpretation of 'significant' and the consequences, and requested that this be quantified (starting point/effect). **Action 0605(a) Closed**

**NEW ACTION 0904: CV Shrinkage - risk of FWACV capping - National Grid NTS to clarify its interpretation of the term 'significant', and the starting point and quantify the effect.**

- b) Consider any impact on IPs. (DRa)

**Update for 0605(b):** LM had previously confirmed at the August meeting that IUK was highly unlikely to experience any impact.

Referring to the slide produced in support of this action, RH reported that the GasLink was mainly supplied by gas from St Fergus and that modelled scenarios do not show that Teesside gas would be a source reaching Moffat, but it was recognised that physically this could happen. It was believed that if the Teesside limit increased to 4mol% it would not increase the upper CO<sub>2</sub> limit of what would be expected at Moffat.

Referring to the point made '*that modelled scenarios do not show that Teesside gas would be a source reaching Moffat, but it was recognised that physically this could happen*' (bullet point 2, sub point 3), JCx had concerns and would want to see it modelled on a summer/winter flow basis given that 16% flow is predicted in the forecasts for 2020 - 2030 (FES assumptions).

Noting that Moffat could see 4% now, RH indicated that there should be no impact on Moffat because its current expectations encompassed a parameter to that potential degree. Scenarios and impacts were discussed. It was noted that UK specifications and GSMR would not be changed before 2020 at the earliest. RH reiterated that Moffat can receive 4% now under current arrangements and there was no impact. Any party currently taking gas through Moffat should be capable of taking gas at 4%.

JCx remained of the view that clarity and evidence to support the statement made '*that modelled scenarios do not show that Teesside gas would be a source reaching Moffat, but it was recognised that physically this could happen*' was required and should be provided for reassurance.

MH commented that many original fields have now depleted and that maintenance 'off' periods will increase the likelihood of variability. **Action 0605(b) Closed**

**0801:** Invite DECC to provide a view on these modifications for inclusion in the Workgroup's report.

**Update:** DRe confirmed that Matthew Bacon was the DECC Gas Quality Expert; AH will invite him to attend the next meeting. **Carried forward**

**0802:** *Variability Data for major entry/exit points:* DRa to consider what can be made available (if already collected), or what can be recovered and provided on a regular basis if not already gathered.

**Update:** Referring to the slide produced in support of this action, RH reported that National Grid NTS has gas quality mechanisms/alarms that receive within day updates, but does not currently have the capability to routinely publish this information. National Grid NTS will endeavour to provide an illustrative historic example of this information. AH added that TGPP would also try and provide relevant data. Referring to variability, NR suggested that (on exit side) what sort of variations over what timeframes would be also helpful. **Carried forward**

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**0803:** *Variability Data for major entry/exit points:* All parties to review the UNCORM Data Dictionary (<http://www.gasgovernance.co.uk/tpddocs>) and other recognised data sources, and assess and report on the capability of providing sufficiently current and accurate data to inform Workgroup views.

**Update:** No update provided at this meeting. **Carried forward**

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**0804:** *Assessment of Environmental Impacts* - For each Modification, the Proposers to review and consider providing appropriate information to meet the requirements necessary under the UNC.

**Update:** It was agreed that the Climate Change Assessments should first be presented to this Workgroup for review, together with any Environmental Assessments. AH asked if there was any methodology/guidance available to draw upon for producing these assessments. The answer being in the negative, it was suggested that the Proposers start with some simple assumptions and return to the next meeting with drafts for review. **Carried forward**

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**0805:** *Ofgem document (dated 20 September 2004) relating to Gas Quality* – NR to provide link to document to DRa and DRa to check currency of information relating to sub terminals, and establish of the 13 sub terminals which take some domestic gas, which of them take 4mol%.

**Update:** Referring to the slides produced in support of this action, RH drew attention to the link (provided by NR) to the document at the back of which would be found the relevant information. RH gave some background to Modification 0049, which had introduced the ability to change from 2% to 2.5% without recourse to further modifications or communications to industry. Asked if information could be provided on which terminals this had happened at, RH explained why this data could not be made public. JCx outlined the circumstances pertaining to Modification 0049, and added that the current benchmark was therefore unknown.

MH suggested that the old issues of transparency and disclosure might usefully be resurrected and be considered as a wider policy issue. DRe indicated this would need consensus and a good strong reasonable argument to consider revival. NR believed it would help the present debate at the current level and assist in understanding of the wider impacts. JC reminded that it was Ofgem's view at the previous meeting that a wider review of gas quality was needed but that it was not going to do it and expected the industry to undertake it. AH pointed out that the Proposers can only carry out Environmental Impact Assessments on their own modifications and not on any other party's arrangements.

LJ pointed out that this was a UNC Workgroup whose remit was to consider the merits and workings of these specific individual modifications; what was being discussed and

promoted sounded more like an issue for a Significant Code Review (SCR) for Ofgem, under which pertinent information might be able to be disclosed.

RH reiterated the premise of Modification 0049. Assessment and forecast needs to be made going forward to see impacts of thresholds/increment changes. JCx observed that projections of what future gas quality will be are unknown. GJ added that system wide analysis would be very complicated; there was still a worry that this was just 'the tip of the iceberg' and that more such modifications would follow. MH reassured that currently there was not a series of other high CO<sub>2</sub> fields waiting to be developed offshore that would precipitate further modifications. AC reiterated that Modification 0498 had been raised to address a very specific scenario with particular conditions under development, and was not considering 4%mol at any other entry points.

LJ reminded that wider Security of Supply needs was a topic for Ofgem to look at, not this Workgroup. It was clear from discussions that the Workgroup was not likely to accede to a single view or perspective regarding these modifications. GJ reflected that the modifications would be judged against the criteria of the relevant objectives, but did this mean that everything else should be ignored? JCx reiterated her concerns that Ofgem was not going to perform an Impact Assessment (IA), noting this had been done in the past for Modification 0049, and pressed for a change in Ofgem's stance, arguing that an IA should be done to assess and weigh up other pertinent factors and the wider effects/consequences. MH referred to CEN standards and the wider industries - CO<sub>2</sub> was a much wider ranging impact. The Workgroup had managed to acquire and assess some information and has sought other data to demonstrate if there is substantial headroom down the East coast. Assessment of historical actual flow quality data might provide sufficient evidence to enable the Workgroup and the UNC Modification Panel to form a high level view. Was the data provided so far adequate for this purpose? It is impossible to inform the debate about the variability of quality because hourly data does not exist.

RH observed that parties other than National Grid NTS had data capture equipment and perhaps they might be willing to provide relevant data. AH confirmed that TGPP had some data for variability and explained in more detail; it was a very complex picture for each entry point, and he felt it would be of very little use. If there was evidence of variability at the point of end user this might be more useful. Variability was discussed, the factors leading to it and how the range might be widened. Blending from different sets of fields took place and it would vary naturally. AH did not see this as having a great impact on the overall variability, which would happen anyway regardless of this modification. It remained a strong belief that a wider Impact Assessment should be performed; however this was beyond the scope and capability of this UNC Modification Workgroup.

Moving on to the second slide, RH explained the data provided. JCx observed that in 2020 Teesside could be delivering 16% of UK summer demand - significantly more than it was currently - and questioned the NTS analysis provided earlier in relation to penetration of the system. AC reiterated the purpose of Modification 0498. FES scenarios were referred to, and the difficulties in forecasting; compared to overall demand a reduction was likely, and going forward higher volumes of CO<sub>2</sub> will be blended with imported gas. JCx pointed out that customers situated closer to exit points would experience greater variability; 16% of demand will penetrate further into the system and may provide a greater fraction of what is entering.

MH suggested that there was a need to understand the disparity between maximum permitted CO<sub>2</sub> and historical actual flow quality for East coast points. What is going to happen when this gas enters the system? This would need an enormous amount of analysis. MH believed that achieving a change in standard would be a big issue for National Grid.

The way forward was discussed. This was believed to be a system-wide issue. The Proposers could only provide additional data from their own points. NR felt there was a

need to establish the margin of change that would be coming from the Proposers' own requests to change. DRe believed that DECC should provide a view. Ofgem had published its response to the CEN consultation (he believed it to be opposed to a widening of the bands); DECC had stated no change before 2020. RH referred to the setting of parameters and assumptions. AH reiterated it was a marginal change being proposed and that the data provided so far did not evidence a great impact. RH confirmed that historical data was currently being reviewed to see if it could be released to this Workgroup. It was suggested that Shippers could ask the Terminal Operators to release data for review/assessment, but it was questioned to whom would it be released to, and who would be best placed to make any sense of it.

It was agreed to close this Action 0805 and Action 0601(a)(ii) and (iii) and create a new action (Action 0901, see below). **Action 0805 Closed**

### **Next Steps**

**NEW ACTION 0901: National Grid NTS (RH) to write to Terminal Operators and request they provide 13 months of CO<sub>2</sub> data (entry and exit) for the following sub terminals: Bacton, Easington, St Fergus, Barrow and Theddlethorpe and also the 2 sub terminals from BP directly to the workgroup.**

MH then suggested that historical data from the 60+ NTS compressors could be made available to inform variability of CO<sub>2</sub> in the NTS at the moment. RH would enquire if this data could be made available.

**NEW ACTION 0902: NTS Compressor Historical Data (CO<sub>2</sub> variability) - National Grid NTS (RH) to ascertain if this data can be made available, and if so provide to Workgroup.**

It was suggested that a better understanding of costs was required, and the costs at the entry points should be identified and who these might ultimately be ascribed to.

LJ summarised the discussion, believing that the question to consider and answer might be: 'the average flows on the system have an average content of X%; the change will have Y% effect; and the Workgroup thinks that *this, that or the other* might happen.'

MH suggested that the effects of a relaxation at Teesside and its surrounding entry/exit points should be analysed by National Grid NTS and the impacts considered. RH observed that National Grid NTS currently models that gas provided in/out is within GSMR parameters; there was no need at the present time to delve deeper; the Ten Year Statement (TYS) provided that 2.5% is the parameter in place.

MH then offered to try and acquire gas quality data from known fields that flow gas into St Fergus.

**NEW ACTION 0903: MH to acquire gas quality data from known fields that flow gas into St Fergus.**

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**0806: Gas Quality at Teesside** – DRa to consider providing information on the gas quality at both entry and exit for comparison and assessment of effects.

**Update:** DRa believed this to be duplication of Actions 0601 (a) (ii) and Action 0601 (b), and proposed this action should be closed. **Action 0806 Closed**

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**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 reported that this was currently being looked at and he encouraged other exit users to do the same. He had provided a document, "The Impact of Natural Gas Composition Variations on the Operation of Gas Turbines for Power Generation", and drawing attention to pages 6 and 7, explained that these examples were being looked for in the data. **Carried forward**

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

**Update:** AH reported it was not a simple question and that work was ongoing in co-operation with BP Gas; brief examples were given of potential configurations and their potential for costs. **Carried forward**

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**0809: Offshore Development Opportunities** – Proposers to describe what these are and their timings, and the potential forecast variations in CO<sub>2</sub>, and then assess the potential effects on Teesside gas entry quality. (BP also to confirm if the forecast information is the most up-to-date.)

**Update:** Work was ongoing; it was agreed that BP Gas would take the lead on this action. **Carried forward**

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**0810: ETS and venting of CO<sub>2</sub> emissions** – Proposers to confirm what is included/excluded and how dealt with.

**Update:** Work is ongoing and will form part of the Carbon Cost Assessments. **Carried forward**

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**2.0 Discussion**

At the conclusion of the presentation provided by National Grid NTS and the wide ranging discussions under certain of the actions (notably 0805) a review of the status of the outstanding actions was undertaken, with some being agreed as fulfilled and others requiring further work to bring to completion (see individual Actions at 1.2, above).

A number of new actions were also agreed as discussions progressed.

**3.0 Legal Text**

None available for review/discussion.

**4.0 Workgroup Report**

The UNC Modification Panel had requested that the Workgroup offer its views/recommendations regarding Modifications 0498 and 0502 in a combined report.

The Workgroup Report (combined 0498 and 0502) is due to be presented at the UNC Modification Panel by 20 November 2014.

Depending on progress, an extension to the reporting date might need to be requested at the October meeting of the UNC Modification Panel. The necessity for this would be reviewed at the next Workgroup meeting. LJ advised the Proposers that a realistic delivery plan would be required to inform any request for an extension, as piecemeal interim extensions would not be appropriate.

**5.0 Any Other Business**

**5.1 Modification 0498 - Change of BP Gas Lead Personnel**

AC advised the Workgroup that Andrew Pearce (AP) would shortly be taking over responsibility for Modification 0498.

**6.0 Diary Planning**

Further details of planned meetings are available at: [www.gasgovernance.co.uk/Diary](http://www.gasgovernance.co.uk/Diary)

The next combined Workgroups 0498/0502 meeting will take place within the Transmission Workgroup on Thursday 02 October 2014, at the ENA, Dean Bradley House, 52 Horseferry Road, London SW1P 2AF.

**Action Table – Combined Workgroup 0498/0502 (04 September 2014)**

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
<b>0601 (a)(ii)</b> (Action expanded at August Meeting)	05/06/14	2.0	<p><i>Issue 1: What is the impact on gas quality at the entry and exit points for a change in the CO<sub>2</sub> to 4% in relation to:</i></p> <ul style="list-style-type: none"> <li>• CV</li> <li>• Wobbe</li> <li>• Variability in h/d/w timeframes</li> <li>• for operation (eg maintenance and performance).</li> </ul> <p>(a)(ii) Provide historical/forecast data on gas quality at other entry points.</p> <p>DRA to consider if the following can be provided and analysed to produce comparisons with Teesside data:</p> <p><i>Entry Points:</i> Bacton, Easington, St Fergus, Barrow and Theddlethorpe and also the 3 sub terminals from BP.</p> <p><i>Gas Quality Elements:</i> Historic CO<sub>2</sub>, Wobbe, and GCV.</p>	NTS (DRa)	<b>Closed</b>
<b>0601 (a)(iii)</b>	07/08/14	2.0	DRA to consider analysing and comparing GCV for entry points on the East coast.	NTS (DRa)	<b>Closed</b>



<b>Action Ref</b>	<b>Meeting Date</b>	<b>Minute Ref</b>	<b>Action</b>	<b>Owner</b>	<b>Status Update</b>
<b>0603</b>	05/06/14	2.0	<i>Issue 3: What is the impact on OEM Warranties if increased levels of CO<sub>2</sub>/inerts are seen?</i> Seek views from Energy UK members, regarding volumes/types/ locations/limits.	Energy UK (JCx)	<b>Closed</b>
<b>0605(a)</b>	05/06/14	2.0	<i>Issue 5: What is the local impact on the DN and NTS operators?</i> a) Understand the network flow impacts (see the GrowHow representation) – in relation to pressure/volumes/CV shrinkage.	NTS (DRa)	<b>Closed</b>
<b>0605(b)</b>	05/06/14	2.0	<i>Issue 5: What is the local impact on the DN and NTS operators?</i> b) Consider any impact on IPs.	NTS (DRa)	<b>Closed</b>
<b>0801</b>	07/08/14	1.2	Invite DECC to provide a view on these modifications for inclusion in the Workgroup's report.	Proposer (AH)	<b>Carried forward</b>
<b>0802</b>	07/08/14	1.2	<i>Variability Data for major entry/exit points</i> - DRa to consider what can be made available (if already collected), or what can be recovered and provided on a regular basis if not already gathered.	NTS (DRa)	<b>Carried forward</b>
<b>0803</b>	07/08/14	1.2	<i>Variability Data for major entry/exit points</i> - All parties to review the UNCORM Data Dictionary ( <a href="http://www.gasgovernance.co.uk/tpddocs">http://www.gasgovernance.co.uk/tpddocs</a> ) and other recognised data sources, and assess and report on the capability of providing sufficiently current and accurate data to inform Workgroup views.	ALL parties	<b>Carried forward</b>

<b>Action Ref</b>	<b>Meeting Date</b>	<b>Minute Ref</b>	<b>Action</b>	<b>Owner</b>	<b>Status Update</b>
<b>0804</b>	07/08/14	2.0	<i>Assessment of Environmental Impacts</i> - For each Modification, the Proposers to review and consider providing appropriate information to meet the requirements necessary under the UNC.	Proposers (AC and AH)	<b>Carried forward</b>
<b>0805</b>	07/08/14	2.0	<i>Ofgem document (dated 20 September 2004) relating to Gas Quality</i> – NR to provide link to document to DRa and DRa to check currency of information relating to sub terminals, and establish of the 13 sub terminals which take some domestic gas, which of them take 4mol%.	EDF Energy (NR) and NTS (DRa)	<b>Closed</b>
<b>0806</b>	07/08/14	2.0	<i>Gas Quality at Teesside</i> – DRa to consider providing information on the gas quality at both entry and exit for comparison and assessment of effects.	NTS (DRa)	<b>Closed</b>
<b>0807</b>	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.	SSE (JC)	<b>Carried forward</b>
<b>0808</b>	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)	<b>Carried forward</b>
<b>0809</b>	07/08/14	2.0	<i>Offshore Development Opportunities</i> – Proposers to describe what these are and their timings, and the potential forecast variations in CO <sub>2</sub> , and then assess the potential effects on Teesside gas entry quality. (BP also to confirm if the forecast information is the most up-to-date.	<i>It was agreed that BP should lead on this action.</i> BP Gas (AC/AP)	<b>Carried forward</b>

<b>Action Ref</b>	<b>Meeting Date</b>	<b>Minute Ref</b>	<b>Action</b>	<b>Owner</b>	<b>Status Update</b>
<b>0810</b>	07/08/14	2.0	<i>ETS and venting of CO2 emissions</i> – Proposers to confirm what is included/ excluded and how dealt with.	Proposers (AC/AP and AH)	<b>Carried forward</b>
<b>0901</b>	04/09/14	1.2	National Grid NTS (RH) to write to Terminal Operators and request they provide 13 months of CO2 data (entry and exit) for the following sub terminals: Bacton, Easington, St Fergus, Barrow and Theddlethorpe and also the 2 sub terminals from BP directly to the workgroup	National Grid NTS (RH)	<b>Pending</b>
<b>0902</b>	04/09/14	1.2	<i>NTS Compressor Historical Data (CO<sub>2</sub> variability)</i> - National Grid NTS (RH) to ascertain if this data can be made available, and if so provide to Workgroup.	National Grid NTS (RH)	<b>Pending</b>
<b>0903</b>	04/09/14	1.2	MH to acquire gas quality data from known fields that flow gas into St Fergus.	Oil & Gas UK (MH)	<b>Pending</b>
<b>0904</b>	04/09/14	1.2	<i>CV Shrinkage - risk of FWACV capping</i> - National Grid NTS to clarify its interpretation of the term 'significant', and the starting point and quantify the effect.	National Grid NTS (RH)	<b>Pending</b>