

**NATIONAL FUEL GAS DISTRIBUTION
WORKPAPER FOR 8/3/06 BPS MEETING – R06008**

Proposed changes to Standard:

4.3.90 The Transportation Service Provider (TSP) should provide on its Informational Postings Web Site daily average gas quality information for prior gas day(s), ~~to the extent available~~, for location(s) that are representative of mainline gas flow. The information available for the identified location(s) should be provided in a downloadable format. Information should be reported in units as specified in the tariff or general terms and conditions. ~~In any event, compliance with gas quality requirements is in accordance with the TSP's tariff or general terms and conditions.~~

The following ~~are examples of~~ gas quality attributes ~~that could~~ should be included, to the extent measured, collected, ~~readily calculated~~ or otherwise available, in the posting for the applicable Gas Day(s) and location(s):

- Heating Value
- Wobbe Number
- Cricondentherm Hydrocarbon Dew Point
- Hydrocarbon Components, % of C1 – Cnn, as used in determining Heating Value
- Specific Gravity
- Water
- Nitrogen
- Carbon Dioxide
- Oxygen
- Hydrogen
- Helium
- Total Sulfur
- Hydrogen Sulfide
- Carbonyl Sulfide
- Mercaptans
- Mercury and/or any other contaminants being measured
- Other pertinent gas quality information that is specified in the TSP's tariff or the general terms and conditions.

Proposed Standard 4.3.x1:

For data provided pursuant to NAESB WGQ Standard No. 4.3.90, the Transportation Service Provider (TSP) should calculate a Wobbe Number for location(s) that are representative of mainline gas flow. Where a TSP uses an alternative method to characterize interchangeability, it may substitute or supplement the Wobbe Number with the applicable data.

Proposed Standard 4.3.x2:

For data provided pursuant to NAESB WGQ Standard No. 4.3.90, the Transportation Service Provider (TSP) should measure or calculate a Cricondentherm Hydrocarbon Dew Point (CHDP) for location(s) that are representative of mainline gas flow. Where a TSP uses an alternative method to control hydrocarbon liquid dropout, e.g. the C6+ GPM method, it may substitute or supplement the CHDP with the applicable data.

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Proposed changes to Standard:

4.3.91 Data provided pursuant to NAESB WGQ Standard No. 4.3.90 should be made available on the Transportation Service Provider's Web Site for the most recent three-month period. At minimum, data for the most recent three-month period should be made available through a single user operation for:

- For a single location representative of mainline gas flow, all Gas Day(s)
- For a single Gas Day, all location(s) representative of mainline gas flow.

Beyond the initial three-month period, the historical data should be made available offline in accordance with regulatory requirements.

Commentary: There was some discussion during the last BPS call requesting an explanation of how gas quality data should be accessible. I'd first like to clarify that my concerns relate entirely to file downloads. While screen displays for a given day or representative point(s) vary from pipeline to pipeline, the displays I've reviewed reasonably present the data in a coherent fashion.

So far as gas quality downloads are concerned, some pipelines have made that functionality accessible from the gas quality screens while others have made the files accessible from the Download link. The gas quality screens seem more intuitive but the Downloads link approach seems to be better from a systems design perspective. Providing a link from the gas quality page to the Downloads link would seem to satisfy both perspectives.

The ideal screen and download functionality would be as follows:

- 1) The screen would ask the user for a beginning and ending date. It would default to the most recent date data was available. Any two equal or succeeding days with the three-month data window would be acceptable entries.
- 2) While the screen would default to providing all reporting locations, a drop box would permit the user to select any available location(s).
- 3) While the screen would default to providing all Gas Quality reporting points, a drop box would permit the user to select any Gas Quality Attribute(s), e.g. BTU, Wobbe Number, CHDP.
- 4) The user can select their preferred download format.
- 5) A means to start the download or reset any of the above parameters should be provided.

Gas Quality Downloads

Beginning Date:	<input type="text" value="8/3/2006"/>
Ending Date:	<input type="text" value="8/3/2006"/>
Reporting Locations:	<input type="text" value="<ALL>"/>  
Gas Quality Attributes:	<input type="text" value="<ALL>"/>  
File format:	<input type="text" value="Comma Delimited"/> 
<input type="button" value="Download"/> <input type="button" value="Reset"/>	

Interim Guidelines

- A. A range of plus and minus 4% Wobbe Number Variation from Local Historical Average Gas or, alternatively, Established Adjustment or Target Gas for the service territory.¹

Subject to:

Maximum Wobbe Number Limit: 1,400²

Maximum Heating Value Limit: 1,110 Btu/scf²

- B. Additional Composition maximum limits:¹

Maximum Butanes+: 1.5 mole percent

Maximum Total Inerts: 4 mole percent

- C. EXCEPTION: Service territories with demonstrated experience³ with supplies exceeding these Wobbe, Heating Value and/or Composition Limits may continue to use supplies conforming to this experience as long as it does not unduly contribute to safety and utilization problems of end use equipment.

Notes:

¹ Experience has shown that using this plus/minus four percent formula in combination with the compositional limits will result in a local Wobbe range that is above 1,200.

² Based on gross or higher heating value (HHV) at standard conditions of 14.73 psia, 60°F, dry, real basis.

³ Demonstrated experience refers to actual end use experience established by end-use testing and monitoring programs.