

UNITED STATES OF AMERICA 113 FERC ¶63,036  
FEDERAL ENERGY REGULATORY COMMISSION

Natural Gas Pipeline Company of America

Docket Nos. RP01-503-002  
RP01-503-003

INITIAL DECISION

(Issued December 20, 2005)

Appearances

*Paul Korman, Paul W. Mallory, and Mustafa Ostrander* for Natural Gas Pipeline Company of America

*Nicole L. Brisker and James P. White* for Alliance Pipeline, LP

*Barbara K. Heffernan and William S. Lavarco* for Aux Sable Liquid Products

*Frederick T. Kolb* for BP America Inc.

*J. Jeannie Myer* for Chevron U.S.A. Inc.

*Gordon J. Smith and Elizabeth A. Zembruski* for Duke Energy Trading & Marketing, LLC

*Nancy Pickover and Sarah E. Tomalty* for FPL Energy, LLC

*Jon L. Brunenkant, Joelle K. Ogg, and Cheryl J. Walker* for the Indicated Shippers<sup>1</sup>

*Lauren D. Boyd* for Marathon Oil Company

*Douglas L. Beresford, David I. Bloom, James Howard, Kevin J. Lipson, Christopher A. Schindler, and Bridget E. Shan* for Nicor Gas

*Richard Dobson, Gerard T. Fox, Mary Klyasheff, and Janice R. Moore* for The Peoples Gas Light & Coke Company and North Shore Gas

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<sup>1</sup> Anadarko Energy Services Company; Anadarko Petroleum Corporation; BP America Production Company; BP Energy Company; Marathon Oil Company; and Chevron/Texaco Natural Gas, a division of Chevron U.S.A. Inc.

*Dena E. Wiggins, David L. Wochner, and Katherine Yarbrough* for Process Gas Consumers, American Iron & Steel Institute, and International Paper Company

*Amy L. Blauman and Linda G. Stuntz* for Shell Gas Transmission

*Marc Gary Denkinger and Arnold H. Meltz* for the Staff of the Federal Energy Regulatory Commission

NACY, Administrative Law Judge:

### Procedural History

1. On March 28, 2003, Natural Gas Pipeline Company of America (Natural) filed revised tariff sheets in compliance with the Commission's February 27, 2003, Order in these proceedings.<sup>2</sup> Among other things, that Order directed NGP to file revised tariff sheets to modify the procedures in its General Terms and Conditions for setting maximum limits on the Btu and/or dewpoint value of the gas entering its system.<sup>3</sup> Natural's compliance filing (a) establishes a permanent hydrocarbon dewpoint (HDP) safe harbor; (b) requires Natural to post certain HDP and Btu values with calculations on its Internet website; (c) requires Natural to continuously post variable safe harbor Btu and HDP values; and (d) requires Natural to make any changes in the variable safe harbor values effective no sooner than 30 days after the changes are posted.
2. The Indicated Shippers and Alliance Pipeline L.P. (Alliance) filed timely protests to Natural's March 28, 2003, compliance filing. The Indicated Shippers also filed a request for rehearing and clarification of the Commission's February 27, 2003, Order.
3. After approval of the intervention of certain parties, a prehearing conference, the establishment of a procedural schedule, and the submission and subsequent withdrawal of an offer of settlement, public hearing was held in these proceedings in Washington, D.C., June 20-23, June 27, June 30, July 1, and July 5-7, 2005.
4. At the hearing 5 witnesses testified and 111 exhibits were identified and offered, of which 109 were received in evidence.
5. Briefs have been filed and duly considered. Any finding or conclusion urged therein, but not made or drawn herein, has been evaluated and found to lack merit or

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<sup>2</sup> Third Revised Sheet No. 343 and First Revised Sheet No. 343A to FERC Gas Tariff Sixth Revised Volume No. 1.

<sup>3</sup> *Natural Gas Pipeline Company of America*, 102 FERC ¶ 61,234 (2003) (Feb. 27, 2003, order).

significance, or to tend only to lengthen this decision without altering its substance or effect.

### Findings of Fact

6. At the outset it must be emphasized that I am ruling on a single issue; namely, the appropriate permanent safe harbor hydrocarbon dewpoint figure for Natural's pipeline.<sup>4</sup> Nothing else is decided here. Other issues, such as a question of a Btu standard, or issues of interchangeability, were beyond the scope of these proceedings.

7. The dewpoint temperature of a gas moving through a pipeline is the temperature at which the flowing gas just begins to change from the single gaseous state to a two-phase flow — a flow containing both gas and liquid components (i.e., when liquids begin to fall out from the gas stream).<sup>5</sup>

8. Natural is a "dry gas" pipeline designed to carry a single phase gas flow.<sup>6</sup> Prior to Natural's initial tariff filing in this case, its FERC Gas Tariff did not contain a specific maximum allowable HDP limit applicable to gas tendered for transportation on its system.<sup>7</sup> Instead, Section 26.1(f) of the General Terms and Conditions (GTC) of the pipeline's tariff stated that "gas tendered to Natural shall not contain any hydrocarbons which might condense to free liquids in the pipeline under normal pipeline operating conditions."<sup>8</sup>

9. In defining the scope and purpose of an HDP safe harbor provision, the Commission, in its September 23, 2003 order, stated that "since the permanent safe harbor dewpoint level is intended to provide shippers a guarantee that gas satisfying that provision will be accepted, regardless of changing conditions on the system, it is important to establish the permanent safe harbor that will accommodate all conditions on Natural's system."<sup>9</sup>

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<sup>4</sup> See *Natural Gas Pipeline Company of America*, 104 FERC ¶ 61,322, at P 38, 62, and 62(A) (2003) (Sept. 23, 2003, order).

<sup>5</sup> Natural Initial Brief at p. 13.

<sup>6</sup> Tr. 1186:3-7.

<sup>7</sup> Exh. APL-1 at p.5.

<sup>8</sup> *Id.*

<sup>9</sup> Sept. 23, 2003, order at P 38.

## Issues and Positions

10. Natural argues that their proposed 15°F HDP safe harbor is fully supported by the record, as well as by the testimony of the only witnesses in this proceeding that have actual experience on the Natural pipeline.<sup>10</sup> Natural maintains that a 15°F HDP will not result in completely eliminating all liquid fallout, but instead, allow Natural to safely and reliably manage a limited amount of fallout.<sup>11</sup> Natural contends that its technical studies followed a methodology consistent with the White Paper on HDP.<sup>12</sup> Natural, and the Indicated Shippers both claim that the White Paper methodology has garnered industry-wide support.<sup>13</sup> Further, Natural states its proposed permanent 15°F safe harbor dewpoint enables Natural to accommodate all conditions on its system.<sup>14</sup> Natural also argues that its proposed safe harbor allows it to operate its system in a safe manner without reliance on Operational Flow Orders (OFOs).<sup>15</sup>

11. Natural finds Indicated Shippers' position (that Natural set the HDP at a level which may be acceptable under most operating conditions and issue an OFO if anything unusual occurs) distorted,<sup>16</sup> reasoning that Indicated Shippers' approach would erode Natural's ability to protect its market area deliveries whenever there are sub-optimal operating conditions, except for regular issuances of OFOs.<sup>17</sup> It submits that a practice of regular issuances of OFOs limiting gas receipts is inconsistent with the permanent safe

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<sup>10</sup> Natural Initial Brief at p. 10.

<sup>11</sup> *Id.* at 11.

<sup>12</sup> *Id.* In 2004, The Natural Gas Council formed a task group to study the formation and effects of hydrocarbon fallout in Natural gas infrastructure. The task group was comprised of individuals representing producers, pipelines, local distribution companies, power generators, and other downstream users of Natural gas. The task group authored the White Paper on Liquids Hydrocarbon Drop Out in Natural Gas Infrastructure (White Paper) which proposed methods to monitor and manage HDP.

<sup>13</sup> Natural Initial Brief at p. 10.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> Sept. 23, 2003, at P 33.

<sup>17</sup> *Id.*

harbor concept aimed at providing producers with a high degree of assurance that their gas would always flow.<sup>18</sup>

12. Further, Natural contends that Indicated Shippers' allegation that a permanent 15°F HDP safe harbor will force producers to do more processing is misleading.<sup>19</sup> Natural contends that on most days the operational dewpoint would be well above the proposed permanent 15°F safe harbor dewpoint.<sup>20</sup> In other words, the actual temperature of the gas permitted to flow through Natural's pipeline will be warmer than the 15°F HDP safe harbor. Additionally, Natural responds that the actual burden on producers of a 15°F versus a permanent 25°F safe harbor dewpoint would be minimal and would occur only where additional processing is critical to the safety of the gas stream.<sup>21</sup> It maintains that the assurance of safety in the market area greatly outweighs this producer burden,<sup>22</sup> and it claims that the Indicated Shippers and other producer interests are seeking to shift costs to downstream facilities and consumers for the economic benefit of producers.<sup>23</sup>

13. Natural argues that Alliance's 25°F HDP proposal should be disregarded because it is not supported by any analysis of the conditions on Natural's system and further, Alliance's methodology does not conform with the gas industry's consensus.<sup>24</sup>

14. Indicated Shippers propose a HDP safe harbor level no lower than 20°F and oppose Natural's proposed 15°F HDP safe harbor level.<sup>25</sup> They allege that Natural's proposed permanent safe harbor dewpoint level is unnecessarily low and unsupported by any of Natural's filings in this proceeding.<sup>26</sup> Indicated Shippers submit that setting a low permanent safe harbor to take into account rarely-occurring severe conditions on

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<sup>18</sup> *Id.* at P 34.

<sup>19</sup> *Id.* at P 35.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> Natural Initial Brief at p. 12.

<sup>25</sup> Indicated Shippers Initial Brief at p. 7.

<sup>26</sup> Sept. 23, 2003, order at P 30.

Natural's system would inflict unnecessary system costs on shippers and require significantly more processing, resulting in significant financial expense for shippers and producers.<sup>27</sup> Indicated Shippers suggest that a permanent 20°F dewpoint safe harbor limit is appropriate to strike a balance between the reluctance to issue OFOs and shippers' and producers' opposition to processing gas to meet a needlessly low dewpoint level.<sup>28</sup>

15. Alliance contends that an HDP safe harbor of 25°F is fully adequate and consistent with the Commission's orders in this case, and that Natural's proposed HDP safe harbor level of 15°F is unreasonably low.<sup>29</sup> Alliance asserts that a 15°F HDP would unduly risk and unnecessarily restrict the supplies of Natural gas that can be delivered to consumers, contrary to the public interest.<sup>30</sup>

16. Two local distribution companies served by Natural, Nicor Gas and Peoples Gas Light and Coke Company/North Shore Gas Company (Peoples/North Shore) both support Natural's proposed 15 degree HDP safe harbor level.<sup>31</sup>

17. Aux Sable Liquid Products (Aux Sable) argues that since Natural adequately manages hydrocarbon liquids fallout with a 25°F HDP operational limit in its market area without experiencing abnormal amounts of hydrocarbon liquids drop out in recent years, a safe harbor of 25°F is appropriate for the Natural system.<sup>32</sup> Aux Sable claims that Natural's actual operating experience since 2001 contradicts Natural's testimony that it needs a 15°F HDP safe harbor in order to minimize hydrocarbon liquids fallout.<sup>33</sup> Aux Sable states that Natural attempted to distinguish its actual operating experience from the safe harbor necessary on its system by arguing the safe harbor must be able to accommodate "all circumstances which could reasonably be expected to occur operationally on Natural's system."<sup>34</sup> However, Aux Sable claims that the record

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<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Alliance Initial Brief at p. 10.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> Aux Sable Initial Brief at p. 18.

<sup>33</sup> Exh. NGP at 25.

<sup>34</sup> Exh. NGP-6 at 28.

demonstrates Natural effectively uses blending and processing to lower the HDP temperature of Natural gas prior to delivery to end-use customers. Therefore, according to Aux Sable, it logically follows that these procedures will ensure Natural can effectively manage gas receipts with HDP temperatures up to 25°F.<sup>35</sup>

#### Discussion

18. The proponent of a tariff change has the burden of proving that the proposed change is just and reasonable. Although Sections 4 and 5 of the Natural Gas Act (NGA or Act)<sup>36</sup> explicitly refer to rate changes, the burden of proof and the just and reasonable standard associated with those two provisions is applied to parties proposing a tariff change that does not involve an increase or decrease in rates.<sup>37</sup> Because Natural seeks to modify Section 26.1 of its tariff, it bears the burden of proof with respect to any such change and must meet the just and reasonable standard of Section 4.<sup>38</sup> The Commission has held that "[where a tariff change proposal is contested . . . it is then reasonable to require the pipeline to come forward with persuasive support for its proposed tariff change in order to meet its burden of proof under section 4 of the NGA."<sup>39</sup> Even if some other safe harbor level could also be found to be just and reasonable (a finding that cannot be made on this record) Natural's proposal must be accepted. As the Commission explained: "[u]nder the statutory scheme set forth in the NGA, the pipeline has the initiative through a section 4 filing to propose how it will recover its costs. If the pipeline's proposal is just and reasonable, the Commission must accept it, regardless of whether other just and reasonable rates may exist."<sup>40</sup> In putting forth alternate proposals, there is no dispute among the parties supporting alternative safe harbor levels in this

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<sup>35</sup> Aux Sable Initial Brief at p. 22.

<sup>36</sup> 15 U.S.C. §§ 717c and 717d (2005).

<sup>37</sup> See *Gulf South Pipeline Co., LP*, 104 FERC ¶ 61,160 (2003) (proposed capacity segmentation plan); *Williams Natural Gas Co.*, 78 FERC ¶61,342 (1997) (proposed amendments regarding periods of daily balancing).

<sup>38</sup> See *Gulf South Pipeline Co., LP*, 104 FERC at P 16 (2003); see also *Williams Natural Gas Co.*, 78 FERC ¶ 61,342,62,458 (1997).

<sup>39</sup> *Williston Basin Interstate Pipeline Co.*, 71 FERC ¶ 61,372, 62,461 (1995).

<sup>40</sup> *Tennessee Gas Pipeline Co.*, 80 FERC ¶ 61,070, p 61,223 (1997). See also, *Transcontinental Gas Pipe Line Corp.*, 94 FERC ¶ 61,362, p. 62,313 (2001). As Alliance correctly points out, Sections 4 and 5 of the Natural Gas Act apply to tariff changes, which do not involve rate changes.

proceeding that they bear a heightened burden of proof under Section 5 of the NGA.<sup>41</sup> Section 5 requires a finding: 1) that Natural's proposed 15°F safe harbor is unjust and unreasonable; and 2) that the alternative proposal is itself just and reasonable.

19. The HDP is critical to safety and reliability.<sup>42</sup> Unless carefully managed, liquid hydrocarbons fall out of the gas stream and cause significant problems for a pipeline.<sup>43</sup> An HDP safe harbor represents the lowest HDP level Natural can set under its tariff, guaranteeing that gas meeting this standard will not be rejected based on its HDP.<sup>44</sup> The purpose of the permanent safe harbor dewpoint is to function as safety floor "intended to provide shippers a guarantee that gas satisfying that provision will be accepted, regardless of changing conditions on the system."<sup>45</sup> On the contrary, it does not operate to establish a target dewpoint level for Natural to reach in its market under most operating conditions, nor is the purpose to impose an overly restrictive gas quality requirement upon shippers.<sup>46</sup> Rather, the Commission made clear that "the purpose of the permanent safe harbor dewpoint is to provide an outer limit to the flexibility we have permitted Natural to vary its gas quality standards to ensure that no liquids fallout in the gas stream."<sup>47</sup> Since the permanent safe harbor dewpoint level is intended to provide shippers a guarantee that gas satisfying that provision will be accepted, regardless of changing conditions on that system, it is important to establish the permanent safe harbor at a level that will accommodate all conditions on Natural's system. At the same time, the permanent safe harbor provision is intended as a protection for shippers from discrimination by the pipeline.<sup>48</sup>

20. The inclusion of a hydrocarbon dewpoint safe harbor into Natural's tariff is an operational necessity because the pipeline's receipts must have a dewpoint temperature

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<sup>41</sup> *Gulf South Pipeline Co.* 104 FERC ¶ 61,160 at P 17 (2003), *accord Equitrans, Inc.*, 64 FERC ¶ 61,155, 62,257 (1993).

<sup>42</sup> Natural Initial Brief at p. 9.

<sup>43</sup> Natural Brief Initial Brief at p. 2.

<sup>44</sup> *Id.*

<sup>45</sup> Sept. 23. 2003, order at P 24.

<sup>46</sup> Nicor Initial Brief at p. 10.

<sup>47</sup> Sept. 23. 2003, order at P 24.

<sup>48</sup> Sept. 23. 2003, order at P 38.

that ensures that liquids will not form during transmission, storage, compression, processing, regulation and delivery. The gas intended to flow through Natural's pipeline needs to have a dewpoint that is low enough to ensure that liquids will not drop out during the physical transportation of the gas and accumulate in the pipeline, because such accumulations give rise to operational problems, including abnormal pressure drops, possible freeze-offs, damage to compression equipment, accelerated corrosion rates, liquids disposal problems and the associated environmental impacts, and interference with gas pressure and volume regulators which could subject equipment to conditions beyond its design parameters.

21. Throughout the winter of 2000-01, the economics of the natural gas and natural gas liquids markets underwent a dramatic change resulting in what is presently described as "upside-down processing economics."<sup>49</sup> At the same time, the price of natural gas outpaced the market value for natural gas liquids.<sup>50</sup> Natural's proposal to add procedures to section 26.1(h) of its GT&C for setting maximum allowable hydrocarbon dewpoint limits is the direct result of problems it experienced during that winter, when gas prices were so high that liquefiable hydrocarbons had a greater value as constituents of the gas stream being transported by Natural than as extracted liquids.<sup>51</sup> Therefore, shippers who ordinarily extracted the liquefiable hydrocarbons before tendering it to Natural did not do so.<sup>52</sup> This caused two non-affiliated gas processing plants that normally would tender processed residue gas to Natural to shut down.<sup>53</sup>

22. Natural's present tariff does not include a provision that establishes an HDP safe harbor for gas delivered to Natural, nor procedures for setting such limits. However, the Commission has found that Natural has "unfettered authority" under Section 26.1(f) of the General Terms and Conditions (GT&C) of its FERC Gas Tariff to control the quality of gas received.<sup>54</sup> Section 26.1(f) provides that gas tendered to Natural "shall not contain any hydrocarbons which might condense to free liquids in the pipeline under normal

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<sup>49</sup> HDP White Paper at § 1.3.

<sup>50</sup> Natural Initial Brief at p. 14.

<sup>51</sup> *Id.* at pp. 14-15.

<sup>52</sup> *Id.* at p. 15.

<sup>53</sup> Sept. 23, 2003, order at P 4.

<sup>54</sup> *Natural Gas Pipeline Co. of America*, 98 FERC ¶ 61,099, p. 61,309 (2002) (hereinafter "Feb. 1, 2002 order").

pipeline conditions."<sup>55</sup> The Commission has stressed the importance of giving Natural flexibility in addressing liquids formation issues on its pipeline, explaining:

Natural does not control all of the factors that determine whether or not it can cope with the amount of rich, non-conforming gas being tendered to it. Natural receives gas from a myriad of different sources, through many different receipt points, and from entities with which Natural is not affiliated. Natural has no control over the decisions these entities make, including decisions that ultimately dictate whether or not each gas volume being tendered to Natural will conform to Natural's GT&C Section 26.1(f) standard. Therefore, Natural needs the flexibility to address changing gas quality conditions over its system ... Natural needs [flexibility] to operate its system so as to maximize gas flow over the system for the benefit of its customers.<sup>56</sup>

23. The Commission further found:

[T]he record shows that, although Natural's blending and liquefiabiles extraction efforts enable it to accept some gas that (strictly speaking) may not satisfy the requirements of [§ 26.1(f) of the General Terms and Conditions of its FERC Gas Tariff], there are physical limits to what Natural's blending and extraction efforts can accomplish.<sup>57</sup>

To that end, the Commission has explained that "[i]f Natural's blending and extraction efforts prove to be inadequate, Natural's only option is to move to control the amount of rich gas entering its system by enforcing GT&C Section 26.1(f) of its tariff."<sup>58</sup> The Commission also recognized that fluctuating market economics dictate whether gas being tendered to Natural will be lean or rich. *Id.* at P 14. While Natural has and will continue to utilize its blending and processing capability to maximize supplies for the benefit of its customers, the purpose of the safe harbor is to set the lowest level to which Natural can control HDP.

24. In deciding this issue, I am bound by what the Commission previously has held: 1) Natural's blending and processing capabilities are limited and, alone, are inadequate to

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<sup>55</sup> Natural's FERC Gas Tariff, General Terms and Conditions, § 26.1(f), Original Sheet No. 342.

<sup>56</sup> Feb. 27, 2003, order at P 31.

<sup>57</sup> *Id.* at P 14.

<sup>58</sup> *Id.* at P 28.

address foreseeable instances of liquids formation;<sup>59</sup> 2) the causes of liquids formation are often beyond the control of a pipeline and, accordingly, Natural should be given flexibility to address changing conditions on its pipeline;<sup>60</sup> 3) the cost of processing nonconforming rich gas must be borne by those shippers who tender such gas;<sup>61</sup> 4) Natural must adopt a safe harbor that accommodates all conditions on its pipeline;<sup>62</sup> 5) the safe harbor level may necessarily be lower than the operational HDP level;<sup>63</sup> and 6) in selecting the HDP safe harbor level for its system, Natural may consider the gas quality restrictions imposed by downstream entities.<sup>64</sup> Finally, the Commission's orders in this proceeding support Natural's need for a safety margin, as well as the importance of affording Natural substantial flexibility to address liquids formation.<sup>65</sup>

25. Natural defined the Chicago market area as its major market zone.<sup>66</sup> Using historical data from its Supervisory Control and Data Acquisition system, Natural determined the normal composition of gas moving into its major market area.<sup>67</sup> Natural also examined measurement data to determine the typical pressure and temperatures at points without line heaters.<sup>68</sup> Natural reviewed a typical recent winter and measured the actual HDP in its major market area. This data shows that the HDP in the market area varies over the winter, but generally peaks within the range of 18°F to 23°F, with average HDP during the winter at around 15°F.<sup>69</sup> The record shows that when the HDP is in the

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<sup>59</sup> Feb. 27, 2003, order at P 14.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.* at P 42.

<sup>62</sup> Sept. 23, 2003, order at P 38.

<sup>63</sup> Sept. 23, 2003, order at P 26.

<sup>64</sup> Feb. 27, 2003, order at P 37-38.

<sup>65</sup> Natural Reply Brief at p. 5.

<sup>66</sup> Natural Initial Brief at p. 18.

<sup>67</sup> *Id.* at pp. 18-19.

<sup>68</sup> Exh. NGP-6 at 14:6 – 16:7.

<sup>69</sup> Exh. NGP-8.

range of 18°F to 23°F, Natural experiences significant fallout of liquid hydrocarbons.<sup>70</sup> Natural's proposed HDP safe harbor is just below the peak range of actual winter experience and coincides closely with the average HDP actually experienced during the winter by Natural. This is the level of HDP at which Natural has successfully managed the fallout of liquid hydrocarbons in the past with its existing facilities.

26. To evaluate the effectiveness of its 15°F HDP safe harbor, Natural developed three phase diagrams representing 10°F, 15°F, and 25°F cricondenthem levels.<sup>71</sup> Initially, on the phase diagrams, Natural plotted the pressure and temperature for points where pressure reductions are made by Natural or by customers immediately downstream of the point of delivery.<sup>72</sup> Natural's methodology identified several points located to the left of the phase curve, indicating that liquids will fall out at the stated pressures and temperatures.<sup>73</sup> Later in rebuttal testimony, Natural prepared three phase diagrams which incorporate a Joules-Thomson (J-T) line into its existing analysis.<sup>74</sup> This line indicates the Joule-Thomson Effect, which states that for each 100 pounds of pressure drop, the gas temperature will drop by seven degrees. A J-T line enables an analyst to identify points where liquids fallout could potentially occur, depending upon the level of the pressure drop at or downstream of the delivery point.<sup>75</sup> Natural then identified the points to the left of the J-T line as potential problems which significantly increased the number of points Natural originally identified.<sup>76</sup> Natural's expert added the J-T line, a line of constant slope that is tangent at a single point to the phase diagram, because the HDP White Paper calls for its application.

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<sup>70</sup> Exh. NGP-11 at 17:18-23.

<sup>71</sup> Exh. NGP-10 (A phase diagram is a curve representing the temperature and corresponding pressure at which gas condensation will begin to occur for a given gas stream. It is also known as a hydrocarbon dew point curve. Individual points along the curve, which represent temperature and pressure combinations where phase change will occur, are known as the cricondenthem).

<sup>72</sup> Natural Initial Brief at pp. 19-20.

<sup>73</sup> Tr. 1175:7 – 1177:23.

<sup>74</sup> Exhs. NGP-22, NGP-23, and NGP-24 apply the J-T line to the HDP curve.

<sup>75</sup> Tr. 1175:7 – 1177:23.

<sup>76</sup> Natural Initial Brief at pp. 20-21.

27. It is evident from the record that Natural will still experience fallout of liquids at numerous points even if it maintains a 15°F HDP level.<sup>77</sup> At 15°F, Natural may experience up to 135 potential instances of liquids formation.<sup>78</sup> In contrast, Natural could expect experience over 160 problematic points at a 20°F cricondenthem and over 190 problematic points under the 25°F proposal.<sup>79</sup> In fact, Indicated Shippers' expert identified almost 1000 specific instances of problems that could occur during a single winter.<sup>80</sup> Although Indicated Shipper's witness initially referred to problems at certain points as occurring "on an infrequent basis"<sup>81</sup> on cross-examination, he conceded that since HDP problems tend to be prevalent during the depths of winter, these "infrequent problems" could actually occur on a weekly basis.<sup>82</sup> Further, Indicated Shipper's witness admitted that Indicated Shippers will not be responsible for solving any HDP problem if it turns out that 20°F safe harbor is not adequate to protect Natural's system. Further, the Alliance witness conceded that Natural would be making significantly greater amounts of liquids in its system under Alliance's proposed 25°F safe harbor level than it would under the 15°F safe harbor proposed by Natural.<sup>83</sup>

28. The experience of Natural's witnesses further supports Natural's proposal. In testifying, Natural's witnesses relied not only on the HDP White Paper methodology, but also on Natural's actual winter experience and their personal experiences and familiarity with the pipeline system in question.<sup>84</sup> The Commission has already held that the dynamic nature of the conditions on Natural's system requires some discretion to deal with the threat of liquids fallout.<sup>85</sup> Thus, the experience of Natural's witnesses must be given an amount of deference in assuring the safe and reliable operation of Natural's system.

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<sup>77</sup> Exh. NGP-22.

<sup>78</sup> Exh. No. NGP-25.

<sup>79</sup> *Id.*

<sup>80</sup> Tr.1295:5-16; Exh. No. IS-11 at 24:9-22.

<sup>81</sup> Exh. IS-11 at 24:16.

<sup>82</sup> Tr. 1296:20-1297:9.

<sup>83</sup> Tr. 1467:13 –1468:11.

<sup>84</sup> Exh. No. NGP-8; Natural Brief at p. 2.

<sup>85</sup> Feb. 27, 2003, order at P 25.

29. It is in Natural's economic interest is to maximize the supplies that can be made available to its customers.<sup>86</sup> Both Alliance and the Indicated Shippers argue that Natural's 15°F safe harbor will result in the reduction of gas supplies available to Natural's customers. However, neither Indicated Shippers, nor Alliance identified any specific gas supplies that would not flow on Natural's system if Natural's proposed safe harbor was adopted. In fact, on cross examination, Indicated Shipper's witness was unable to substantiate that production would be impacted. Indeed, all that would be required to assure gas flow on Natural's system would be processing so that gas met the posted limit. Additionally, adopting the alternative safe harbor proposals of the Indicated Shippers or Alliance would shift the costs of processing rich nonconforming gas away from the party tendering rich gas. The Commission has already concluded:

[T]he shipper that injects rich gas at any point, or along any given line segment of Natural's system, must bear the cost of processing that nonconforming gas, since in the absence of such processing the presence of that rich gas in Natural's system could prevent Natural from providing service to other customers.<sup>87</sup>

Even the Indicated Shippers' witness agreed that the place to solve gas quality problems is at the source.<sup>88</sup>

30. Natural has satisfied its burden under Section 4 of the Act to show that its proposed HDP safe harbor is just and reasonable. Using an accepted scientific, industry-approved methodology for computing HDP limits, it selected a safe harbor level that will ensure safe and reliable operations under all conditions while also maximizing the gas supply available on its system. The witness for the Indicated Shippers admits that a 15°F safe harbor is reasonable.<sup>89</sup> In his prepared direct testimony, he states that "one might conclude that a 15° Fahrenheit [level] seems reasonable."<sup>90</sup> Natural does not anticipate imposing the 15°F level on most days and only seeks to impose that level when necessary to ensure operational integrity and to meet downstream customer requirements.<sup>91</sup>

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<sup>86</sup> "[T]he goal is to provide the most amount of opportunity for production to flow on our system." Tr. 85:23-25.

<sup>87</sup> Feb. 27, 2003, order at P 42.

<sup>88</sup> Tr. 1267:3-6; Tr. 1273:5-12.

<sup>89</sup> Exh. IS-1 at 20:17-18.

<sup>90</sup> *Id.*

<sup>91</sup> Peoples Initial Brief at pp. 10-11.

Routinely, Natural posts operational HDP levels well above 15°F under ordinary circumstances in order to maximize production. In extraordinary circumstances where the safe harbor could come into play, the safety of Natural's system and of its downstream customers must trump the short term production and profit goals of producers.<sup>92</sup> Additionally, Natural's approach is just and reasonable because it does not attempt to preclude all fallout of liquid hydrocarbons.<sup>93</sup> Rather, its proposed safe harbor is designed to limit liquids fallout to manageable levels. In fact, the proposed safe harbor is just below the "peak" HDP level generally experienced by Natural in the winter and is in line with average HDP levels during the winter, as shown on Exh. No. NGP-8. Thus, Natural's proposal is well grounded in actual experience.

31. It is illogical to set a safe harbor at the same level as Natural's operational goal because it would not allow for any margin for error and virtually all unexpected circumstance could result in significant, and potentially dangerous liquid fallout.<sup>94</sup> The safe harbor must be set somewhat below the outer operational target to provide a margin of safety.<sup>95</sup> Therefore, Indicated Shippers 20°F dewpoint level does not provide an acceptable safety margin and instead leaves Natural "at the mercy of the nomination process."<sup>96</sup> In fact, Natural's analyses demonstrate that at a 17°F gas stream temperature and a volume of 2,700 MMcf, the amount of liquids produced would approach 7,000 gallons in a day if Natural were limited to a 20°F safe harbor, while a 15°F would produce no liquids. Alliance's 25°F proposal is also flawed because fails to provide an appropriate margin of error. Notably, Alliance's proposal is not based upon industry standards, ignores above-ground facilities, and does not focus on the coldest ground temperature readings, which represent the greatest potential for liquids fallout.<sup>97</sup> Alliance's witness proposed to set the safe harbor based on average ambient ground temperatures and an assumed pressure drop of 150 pounds per square inch gauge ("psig"). Not only is this methodology out-of-step with the industry-wide methodology for determining HDP limits, it is not based on Natural's operations. In attempting to support Alliance's 25°F safe harbor proposal, Alliance's witness assumed that Natural would not experience pressure drops in excess of 150 psig. This assumption is not based

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<sup>92</sup> Natural Reply Brief at p. 4.

<sup>93</sup> Exh. NGP-6 at 27:3-5; Tr. 563:17 – 564:5.

<sup>94</sup> Exh. NGP-11 at 12:4-19.

<sup>95</sup> Exh. NGP-20 at 18:15-23.

<sup>96</sup> Exh. NGP-20 at 20.

<sup>97</sup> People's reply brief at p. 5.

on facts about Natural's system, but rather this figure represents the average pressure drop on Alliance.<sup>98</sup> Based on this irrelevant assumption, Alliance's witness concluded that a 25°F safe harbor provides a sufficient margin of safety. However, Natural quite frequently experiences pressure reductions in excess of 150 psig. Even Alliance's witness conceded on cross examination that Natural experienced numerous pressure drops of greater than 150 psig.<sup>99</sup>

#### Ultimate Findings and Conclusions

32. From the record of these proceedings, and from the foregoing findings and discussion, I find that Natural's proposed HDP safe harbor if 15°F is just and reasonable under Section 4 of the Act, and not otherwise unlawful.

Joseph R. Nancy  
Administrative Law Judge

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<sup>98</sup> Exh. APL-1 at 12-13.

<sup>99</sup> Exh. NGP-19