



July 16, 2021

Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Attention: Ms. Kimberly D. Bose, Secretary

Re: Wobbe Number Modification Filing;
Colorado Interstate Gas Company, L.L.C.;
Docket No. RP21-

Commissioners:

Colorado Interstate Gas Company, L.L.C. ("CIG") tenders for filing and acceptance by the Federal Energy Regulatory Commission ("Commission") the tariff record listed below for inclusion in its, Second Revised Volume No. 1 FERC Gas Tariff ("Tariff"):

Part IV: General Terms and Conditions ("GT&C"), Section 3 – Quality, Version 9.0.0

Proposed to become effective August 15, 2021, the tariff record revises the Wobbe ranges permitted for gas deliveries at certain locations on CIG's system. Additionally the tariff record introduces provisions designed to clarify the expectations and obligations of CIG and its shippers, especially during atypical operating conditions.

Background

CIG utilizes Wobbe number ranges set forth in its Tariff to manage the gas composition of deliveries at various locations on its system.¹ Local distribution companies that are CIG shippers have developed distinct requirements for the quality of gas delivered into their distribution systems at these locations. In order to accomodate

¹ GT&C Section 3.5 of CIG's Tariff provides that the Wobbe number range specifications are applicable to receipts or deliveries on CIG's Valley Line, High Plains (Derby Lake) and 9B pipeline. CIG and shippers previously agreed to Wobbe specification revisions in response to user requirements, changes in Valley Line equipment, facilities, and gas supply sources. See Docket No. RP12-774-000. CIG's Valley Line is defined in General Terms and Conditions ("GT&C") Section 1.117 of its Tariff as the portion of its system that extends south from the Watkins Compressor Station near Denver, CO and continues generally southeast to Campo Junction in the southeast corner of Colorado. The Valley Line primarily serves communities along the Front Range of the Rocky Mountains including Denver, Colorado Springs and Pueblo, Colorado.

the unique interchangeability requirements of these customers², GT&C Section 3.5 (a) and (b) of CIG's Tariff currently provides Wobbe number ranges applicable to the Valley Line, the 9B pipeline and the Derby Lake Point of Delivery ("Derby Lake") located on CIG's High Plains system.

GT&C Section 3.5(a) of CIG's Tariff currently provides for a Wobbe range for gas delivered on the Valley Line of 1,185 to 1,285. Should situations occur that CIG cannot maintain the Wobbe specification on the Valley Line within the specified range, the upper limit of the range may be extended up to 1,310. Similarly, GT&C Section 3.5(b) currently provides for a Wobbe range of 1,185 to 1,285 for gas delivered at the Derby Lake located on CIG's High Plains System³ or on the 9B pipeline. Should situations occur where CIG cannot maintain the Wobbe within this specified range, the upper limit of the range may be extended up to 1,338 on a daily basis. This provision also contemplates situations where excursions from the applicable Wobbe number range occur on an hourly basis.

In this filing, CIG is proposing to (i) modify Wobbe ranges, (ii) establish procedures CIG will use to return the standard Wobbe range after atypical operating conditions occur, (iii) remove hourly references and (iv) update CIG's Wobbe excursion notification requirements. The proposed changes are discussed below.

Reason for Filing

In order to manage the Wobbe levels on its system, CIG blends gas supply with varying Wobbe numbers at its Campo Junction location and injects air into the natural gas stream at various air blending locations on its system to meet Wobbe natural gas specifications stipulated in its tariff.⁴

In recent years, natural gas delivered into CIG's system from production areas within the Denver-Julesburg ("DJ") Basin⁵ has increased dramatically overall and is currently the sole source of gas being transported south toward the Campo Junction on CIG's system.⁶ DJ Basin natural gas possesses a high Wobbe number. At the same

² Interchangeability is defined as "The ability to substitute one gaseous fuel for another in a combustion application without materially changing operational safety, efficiency, performance or materially increasing air pollutant emissions." White Paper on Natural Gas Interchangeability and Non-Combustion End Use, NGC+ Interchangeability Work Group, February 2005 ("White Paper").

³ The High Plains system is described in CIG's Tariff in GT&C Section 1.35(A).

⁴ See Tab A for a diagram displaying the location of the DJ and Raton Basins, as well as the location of existing CIG air blending facilities.

⁵ The DJ Basin is a geologic structural basin centered in eastern Colorado, extending into southeast Wyoming, western Nebraska and western Kansas. The DJ Basin has been and continues to be a prolific oil and gas production basin.

⁶ See Tab B for a graph displaying historical receipt quantities from the DJ and Raton Basins.

time and as shown on Tab B, natural gas produced in the Raton Basin⁷, which has a lower Wobbe number, has declined. This shift in gas supply mix has resulted in an overall increase in the natural gas Wobbe numbers on CIG's system.⁸

As mentioned above, CIG also injects air into the natural gas stream at various air blending locations located throughout its system in order to manage the Wobbe number as part of its day to day operations. Given the higher Wobbe number of natural gas on its system, during peak operating conditions (i.e., extreme cold weather events), the existing capabilities of CIG's air blending facilities serving the Valley Line and the High Plains system cannot adequately blend the high Wobbe number natural gas down to the specifications set forth in its Tariff. While peak day conditions are relatively infrequent, CIG is facing operational conditions that challenge its ability to meet its existing Wobbe blending capabilities.

In response, CIG has discussed with various affected shippers its Wobbe-related operational challenges and addressed possible long-term actions needed to meet the gas Wobbe number requirements. Potential solutions have included the expansion of existing air blending facilities or the construction of new air blending facilities on CIG's system⁹, as well as the adjustment of CIG's tariff specifications for Wobbe number ranges and upper limits for peak day conditions shown in CIG's Tariff. Based on these discussions, and in lieu of constructing/modifying facilities, CIG and various shippers agreed to modify CIG's Tariff in order to address the operational challenges presented by the increasing Wobbe number of the natural gas. The tariff language described below is the product of a multi-year consultative effort with CIG and its customers.

Wobbe Number Updates Under Typical Operating Conditions

CIG has conducted an analysis of natural gas being delivered onto its system over the last seven years, and it shows that the Wobbe numbers of natural gas being supplied have increased over time. As shown on Tab C, the Wobbe number attributable to Raton Basin natural gas supply has remained stable at approximately 1,340.¹⁰ Since the lowest Wobbe number of natural gas being received by CIG has generally not been lower than 1,340, CIG has agreed at the request of certain shippers to increase the lower Wobbe range from 1,185 to 1,195. This change will more closely align the lower Wobbe limit with the historical natural gas Wobbe number on CIG's

⁷ The Raton Basin is a coalbed methane natural gas producing basin located in southern Colorado and northern New Mexico.

⁸ See Tab C for detail on historical Wobbe levels associated with Raton and DJ Basin natural gas supply.

⁹ Based on a recent preliminary review of air-blending facilities that would be required to address the additional air blending needs, CIG estimates the cost of such facilities could be greater than \$16 million.

¹⁰ The Wobbe number specifications detailed in GT&C Section 3.5 are not applicable to raw/unblended natural gas receipts from the Raton supply basin and the DJ supply basin shown on Tab C.

system, will not affect the current upper limit of 1,285 and will not increase CIG's operational risk. Accordingly, and as shown on the attached tariff record for GT&C Section 3.5, the proposed Wobbe number range for the Valley Line, Derby Lake and the 9B pipeline is being adjusted to 1,195 to 1,285. To ensure these specifications can be met, the parties also agreed to add a provision in GT&C Section 3.5(e) whereby CIG may refuse to accept gas outside the acceptable range of 1,195 to 1,285.

Wobbe Number Updates Under Atypical Operating Conditions

Recognizing that periodically severe cold weather conditions may affect CIG's ability to meet the 1,285 Wobbe number upper range limit on its Valley Line, Derby Lake and 9B pipeline, CIG and various shippers agreed that CIG may temporarily extend the upper Wobbe range limit to 1,320. Using an operational example, if CIG is unable to meet the upper Wobbe number limit of 1,285 at these locations, then CIG will adjust air blend facility Wobbe set points such that the Valley Line Wobbe number would be maintained at 1,320, while the Wobbe number limit for Derby Lake and the 9B pipeline may extend up to of 1,352. Once operational conditions improve on its system, CIG will first reduce the Wobbe number for Derby Lake and Line 9B to 1,320 and then reduce the Wobbe numbers on the Valley Line, Derby Lake and Line No. 9B to 1,285 or below. These provisions will provide CIG and shippers certainty on how CIG will operate its system during severe cold weather conditions.

Modification of Hourly Wobbe and Notification Provisions

In addition to the Wobbe number range modifications discussed above, CIG is also proposing to remove references to situations that occur on an hourly basis. Currently, GT&C Section 3.5(a) contemplates situations where on an hourly basis, CIG is unable to maintain the Wobbe number within the specified range for Valley Line deliveries. A similar hourly excursion for Derby Lake deliveries on CIG's High Plains system and the 9B pipeline is found in GT&C Section 3.5(b). To date, CIG has avoided hourly excursions from the Wobbe number range on the Valley Line or High Plains facilities. Therefore, CIG is proposing to remove the hourly excursion concept from these sections to better align the tariff language with CIG's actual operating experience.

GT&C Sections 3.5(a) and 3.5(b) currently provide that CIG will notify shippers when Wobbe numbers vary outside the acceptable range. Under GT&C Section 3.5(a) for Valley Line deliveries, shippers shall be notified within thirty minutes of the discovery of such variation. Similarly, GT&C Section 3.5(b) provides that for deliveries at Derby Lake located on CIG's High Plains system and the 9B pipeline, shippers shall be notified as soon as practicable. CIG has removed these notification requirements from its Tariff.

Even though CIG has removed these formal notification requirements from its Tariff, CIG and various shippers have agreed to include updated notification procedures

in GT&C Section 3.5(c) wherein CIG shall post a notice on its electronic bulletin board to inform shippers and operators when it anticipates that operating conditions (such as severe cold weather) may necessitate Wobbe numbers on its system to exceed 1,285. If CIG actually experiences Wobbe number excursions exceeding 1,285, then CIG will provide prompt notice to shippers and operators via email or other electronic means.

Recognizing the natural gas supply and associated operational changes CIG's system has been experiencing, the proposed Wobbe modifications will permit CIG to continue to serve its customer base during cold-weather high demand periods. In periods in which Wobbe numbers exceed 1,285, CIG will utilize the full capability of its existing, certificated air blending facilities to return to the normal Wobbe number range of 1,195 to 1,285 range as soon as reasonably practicable. Further, the proposed changes to the existing Wobbe number ranges and limits are within the applicable interchangeability principles suggested by the Commission: (i) the tariff specifications related to Wobbe numbers can be enforced; (ii) the proposed changes provide clarification to shippers describing how CIG will manage its system during strained operating conditions allowing CIG sufficient flexibility to respond to changing system conditions, and (iii) the updated Wobbe numbers have been developed in concert with various shippers and are based on recent natural gas quality and operational data.¹¹

Affected Shippers

As mentioned above, CIG has consulted with operators/shippers that would be affected by the proposed tariff change. Based on these consultations, the following shippers have provided feedback and informed CIG that they support or do not oppose the changes listed in this filing.

Atmos Energy Corporation	Colorado Springs Utilities
Black Hills Service Company, LLC	Public Service Company of Colorado
Raton Gas Transmission Company	Colorado Natural Gas, Inc.
CF&I Steel, L.P. DBA Evraz Rocky Mountain Steel	

CIG is not aware of any adverse comments from other parties.

Description of Filing

CIG is submitting the following tariff records pursuant to 18 C.F.R. § 154.112(b) (2020), and Part 154, Subpart C of the Commission's regulations.

¹¹ See *Paragraphs 29-31*; Natural Gas Interchangeability, Docket No. PL04-3-000, 115 FERC.¶ 61,325 (June 15, 2006).

Part IV: General Terms and Conditions – Section 3 – Quality is updated to revise the Wobbe number ranges and related upper limits to the Wobbe number range for Valley Line, Derby Lake and 9B pipeline locations, to establish procedures for system operations related to atypical system conditions, to eliminate the hourly excursion limits and to simplify the notification provisions.

Section 154.204 Discussion

Pursuant to Section 154.204 of the Commission's regulations, CIG states the following:

- (a) CIG does not anticipate an increase in costs or an increase in revenues as a result of the proposed tariff changes; and
- (b) CIG is not aware of any filings pending before the Commission that may significantly affect this filing.

Procedural Matters

Inasmuch as this filing is fully described herein, the statement of the nature, the reasons and the basis for the instant tariff filing required by 18 C.F.R. § 154.7(a)(6) (2020) of the Commission's regulations is omitted.

In accordance with the applicable provisions of Part 154 of the Commission's regulations,¹² CIG is submitting an eTariff XML filing package, which includes the following:

- (a) a transmittal letter;
- (b) Tab A, a map displaying the location of CIG's blending facilities;
- (c) Tab B, a graph detailing gas receipts from the DJ and Raton Basins;
- (d) Tab C, a graph showing historical Wobbe numbers on CIG's system; and
- (e) clean and marked versions of the tariff record in PDF format.

CIG respectfully requests the Commission accept the tendered tariff record for filing and it to become effective on August 15, 2021, which is not less than thirty (30) days following the date of this filing. With respect to any tariff record the Commission allows to go into effect without change, CIG hereby moves to place the tendered tariff record into effect at the end of the suspension period, if any, specified by the Commission.

¹² 18 C.F.R. §§ 154.101 - 154.603 (2020).

Correspondence and communications concerning this filing should be directed to:

Mr. Francisco Tarin
Director, Regulatory
Colorado Interstate Gas Company, L.L.C.
Post Office Box 1087
Colorado Springs, CO 80944
Telephone: (719) 667-7517
CIGRegulatoryAffairs@kindermorgan.com

Mr. Tony Sala
Managing Counsel
Colorado Interstate Gas Company, L.L.C.
Post Office Box 1087
Colorado Springs, CO 80944
Telephone: (713) 420-6431
Tony_Sala@kindermorgan.com

These persons have been designated for service in accordance with Rule 203 of the Commission's Rules of Practice and Procedure.

The undersigned hereby certifies that he has read this filing and knows (i) the contents of such filing and the attachments; (ii) that the contents as stated in the filing and in the attachments are true to the best of his knowledge and belief; and (iii) that he possesses full power and authority to sign this filing.

Respectfully submitted,

COLORADO INTERSTATE GAS COMPANY, L.L.C.

By _____/s/_____
Francisco Tarin
Director, Regulatory

Enclosures

Certificate of Service

I hereby certify that I have this day caused a copy of the foregoing document to be served upon all shippers on CIG's system and interested state regulatory commissions, in accordance with the requirements of Section 385.2010 of the Commission's Rules of Practice and Procedures.

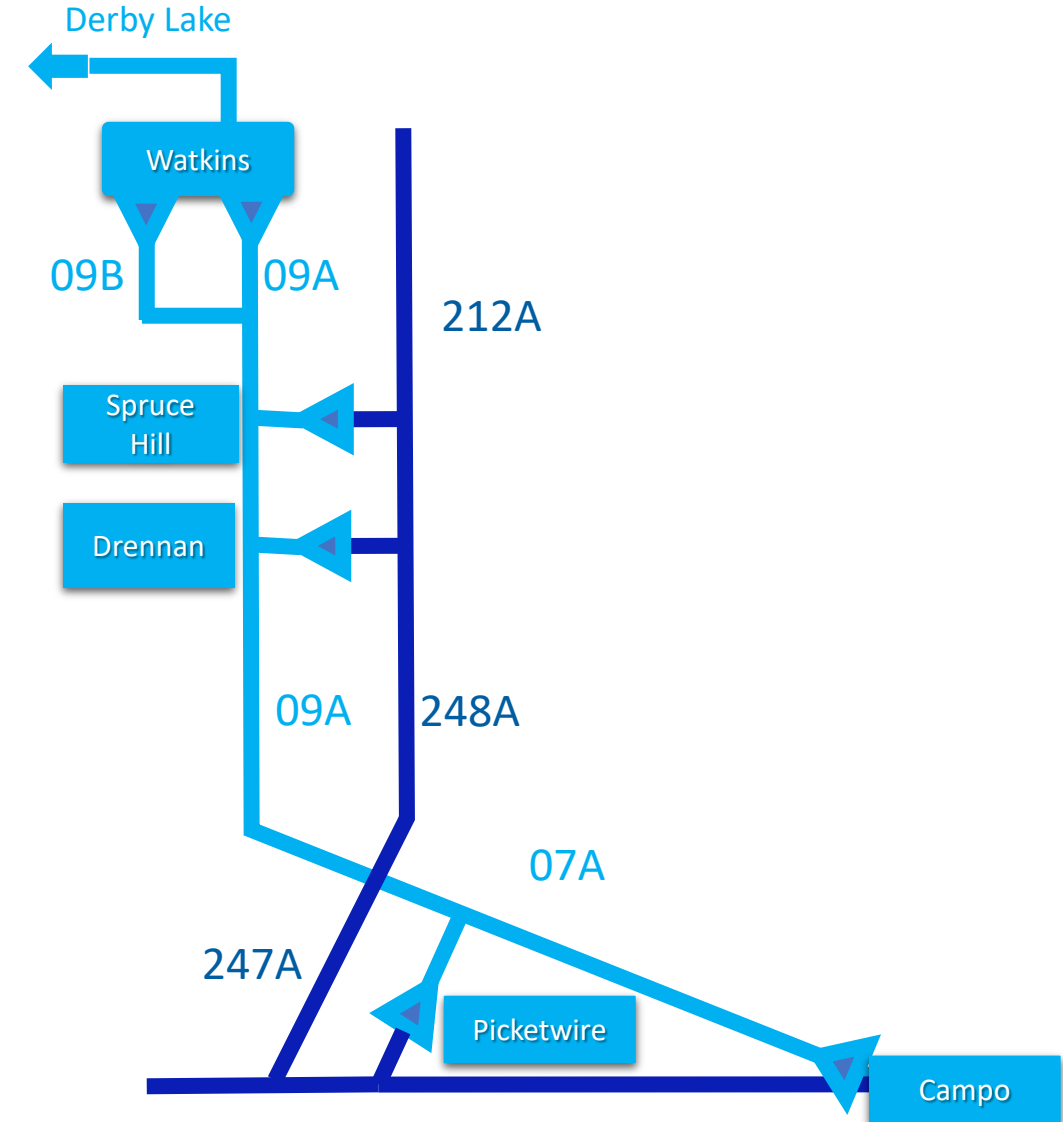
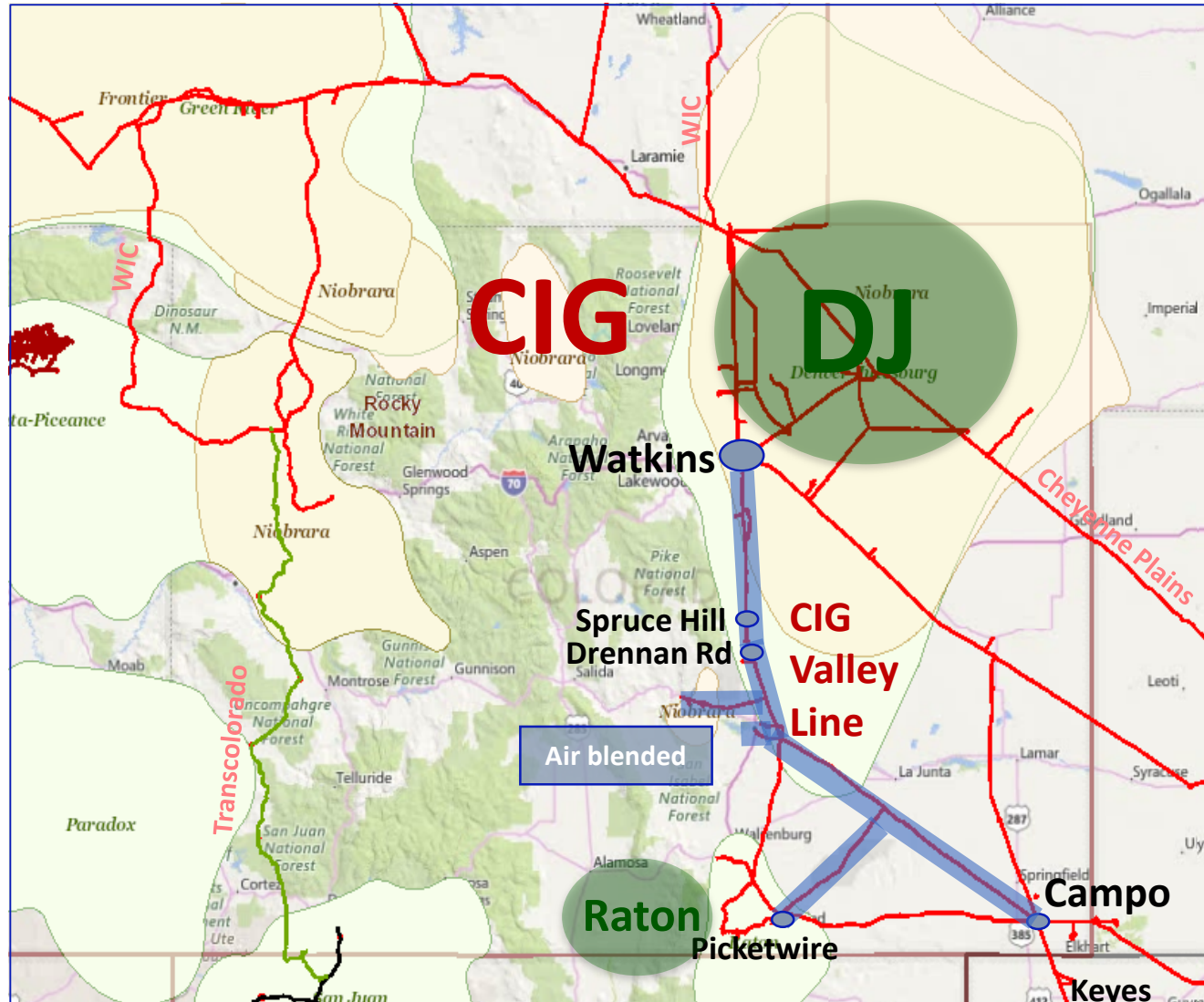
Dated at Colorado Springs, Colorado as of this 16th day of July, 2021.

/s/
Francisco Tarin

Post Office Box 1087
Colorado Springs, CO 80944
(719) 667-7517

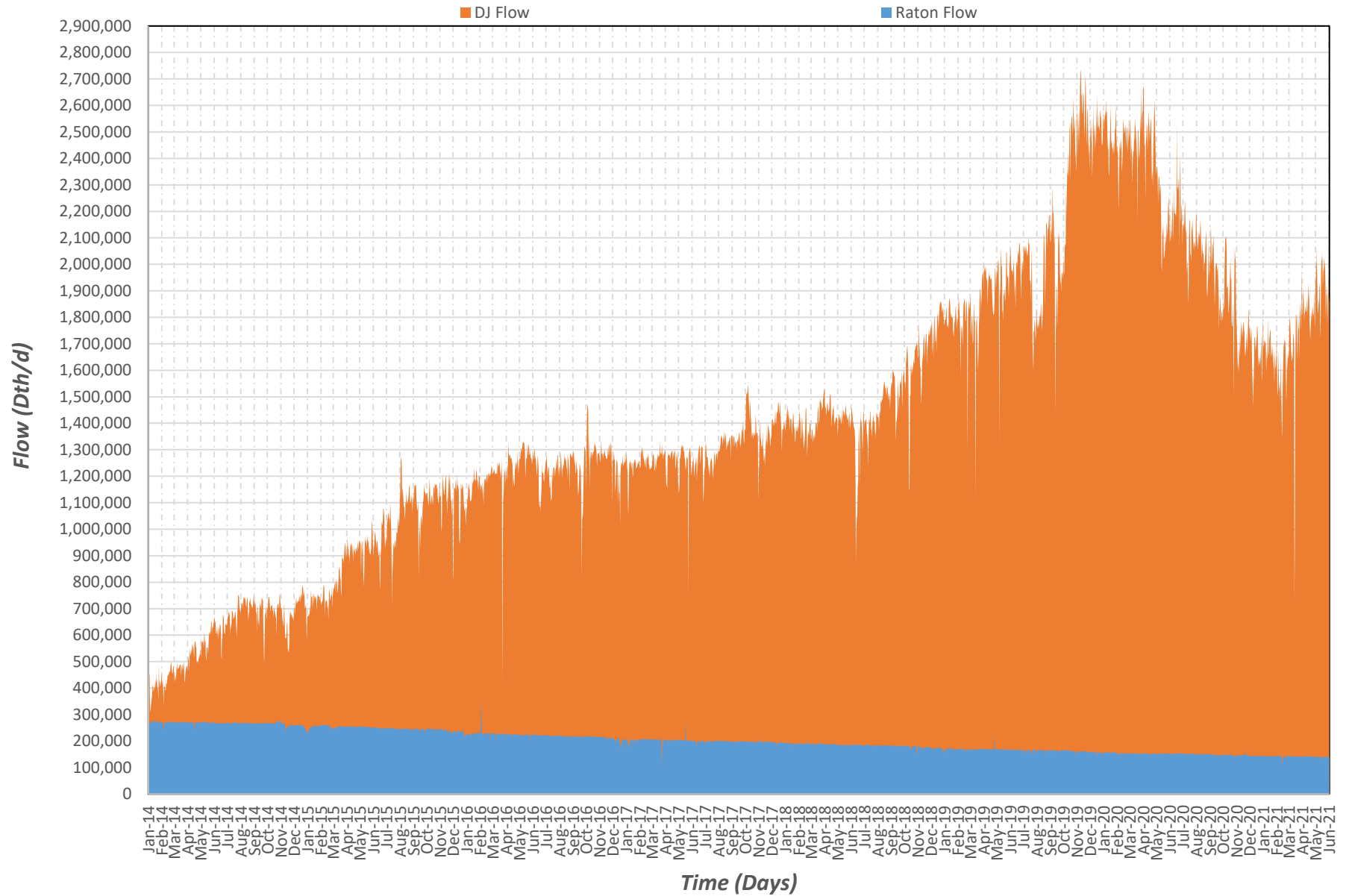
TAB A

ClG Air Blending Facilities



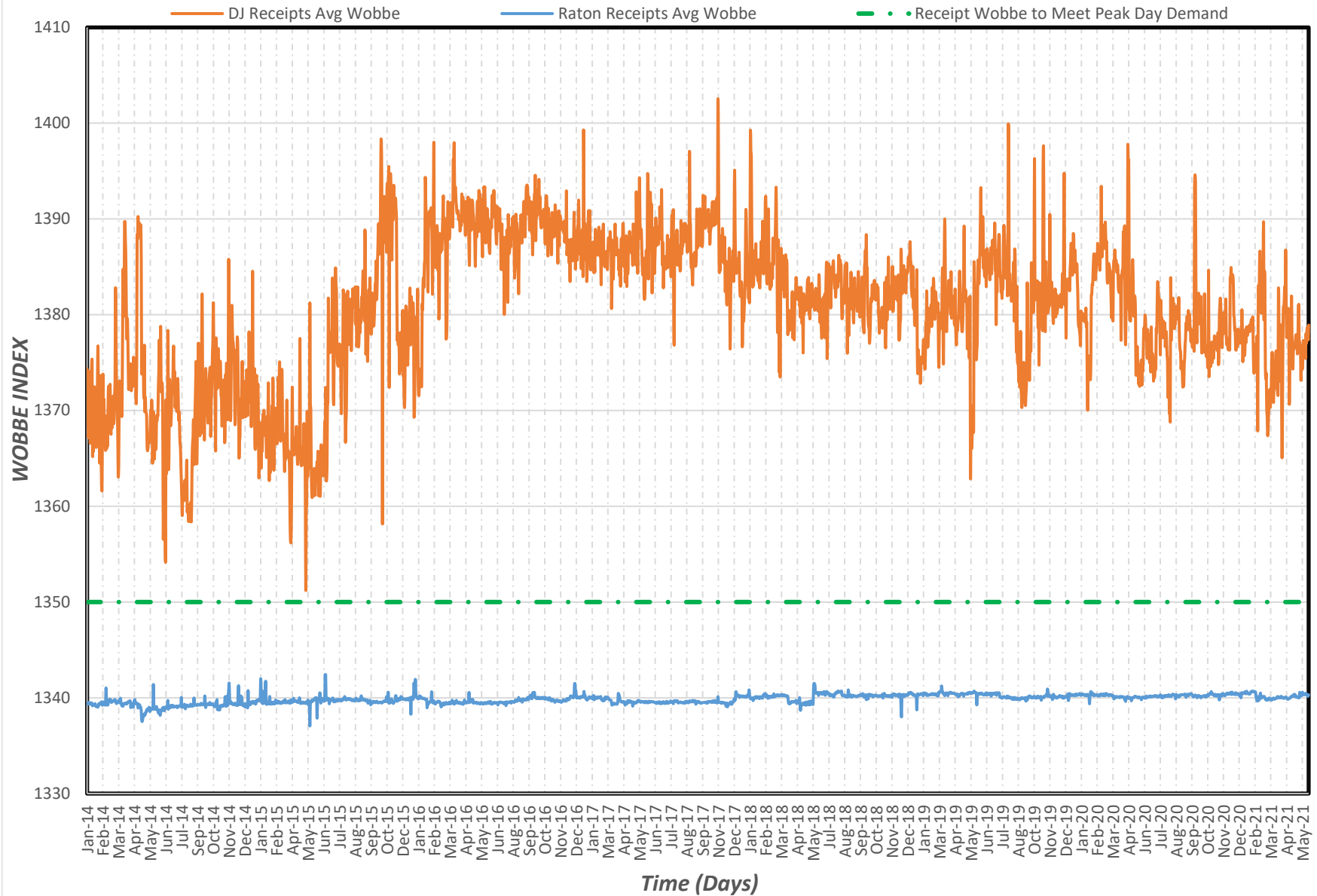
TAB B

DJ and Raton Flow Comparison



TAB C

DJ and Raton Wobbe Comparison



3. QUALITY

- 3.1 Specifications. Unless otherwise agreed pursuant to Sections 3.2 and 3.3 below, Shipper warrants that Gas Tendered hereunder at each Point of Receipt and Point of Delivery will comply with the following quality specifications:
- (a) At a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit, such Gas shall not contain more than:
 - (i) .25 grain of hydrogen sulphide per 100 cubic feet,
 - (ii) 5 grains of total sulphur per 100 cubic feet,
 - (iii) 10 parts per million (0.001 percent) by volume of oxygen; however, this oxygen quality specification shall not apply at Point(s) of Delivery on the Valley Line and its supporting blending operations (see Section 3.5 below for oxygen specifications applicable to the Valley Line and its supporting blending operations,)
 - (iv) 3.0 percent by volume of carbon dioxide,
 - (v) 7 pounds of water vapor per million cubic feet at Point(s) of Receipt and Point(s) of Delivery within the states of Kansas, Oklahoma, and Texas and 5 pounds of water vapor per million cubic feet in all other states.
 - (b) Shipper warrants that all Gas Tendered will be commercial in quality and shall be free from any foreign material such as solids, lubricating oils, sand, dirt, dust, gums, crude oil, water or hydrocarbons in the liquid phase, metal particles, and other objectionable substances, including, but not limited to, polychlorinated biphenyls, which may be injurious to pipelines, people, property, or the environment which may interfere with its Transportation or makes the Gas unmarketable or unacceptable for Delivery from Transporter's transmission system.
 - (c) Shipper warrants that all Gas Tendered will have a Gross Heating Value of not more than 1,235 Btu's nor less than 968 Btu's per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit.
 - (d) Shipper warrants that the temperature of the Gas Tendered will not exceed 120 degrees Fahrenheit; provided, however, if Transporter is required to dehydrate the Gas at the Point(s) of Receipt, then the temperature of such Gas shall not exceed 90 degrees Fahrenheit.

3.1 Specifications (continued)

- (e) Shipper warrants that the hydrocarbon dew point of all Gas Tendered will not exceed a temperature of 25 degrees Fahrenheit at any pressure between 100 p.s.i.a. and 1,480 p.s.i.a. as calculated from the Gas composition.

Notwithstanding Sections 3.1 through 3.3, Transporter shall not be required to receive Gas at any Point of Receipt which is of a quality inferior to that required by Shipper or a third Party at any Point of Delivery under the Agreement. Transporter shall not be liable to Shipper or any third Party for any damages incurred as a result of Transporter's refusal to receive Gas as a result of this provision.

3.2 Specification Exemptions. Transporter, in its reasonable discretion and judgment, may accept Gas that does not conform to the quality specifications in Section 3.1 but meets the conditions set forth below, provided Transporter determines that such acceptance will not interfere with Transporter's ability to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

- (a) Transporter may accept Gas with no more than 2000 parts per million (.200 percent) by volume of oxygen at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit at any Point(s) of Receipt.
- (b) Transporter may accept Gas with a hydrocarbon dew point in excess of 25 degrees Fahrenheit at any pressure between 100 p.s.i.a. and 1,480 p.s.i.a. as calculated from the Gas composition; provided that the Gas is subsequently processed at the BP Wattenberg, Regency Lakin, Mocane, CIG Rawlins, Williams Field Service Echo Springs or DCP Roggen plants. However, the Gas must meet the Section 3.1(e) specification after processing at these plants and upon reintroduction into CIG's mainline facilities.
- (c) Transporter may accept Gas with a water vapor content in excess of 7 pounds per million cubic feet; provided that the Gas is subsequently processed within the Regency Lakin and Mocane plant. However, the Gas must meet the Section 3.1(a)(v) specification after processing at this plant and before reintroduction into CIG's mainline facilities.
- (d) Transporter may accept Gas with a hydrocarbon dew point in excess of 25 degrees Fahrenheit at any pressure between 100 p.s.i.a. and 1,480 p.s.i.a. as calculated from the Gas composition at the East Dry Creek, Cavalry, Bent-Wagon Trail and Fluke Meter Stations for quantities not to exceed 1,000 Dth/d at each location and at the Kiowa Meter Station for quantities not to exceed 4,000 Dth/d.

3.2 Specification Exemptions (continued)

- (e) Transporter may accept Gas with a Gross Heating Value in excess of 1,235 Btus per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit; provided that the Gas is subsequently processed at the BP Wattenberg, Regency Lakin, Mocane, CIG Rawlins, or DCP Roggen plants. However, the Gas must meet the Section 3.1(c) specification after processing at these plants and upon reintroduction into CIG's mainline facilities.
- (f) Transporter may accept Gas with a Gross Heating Value in excess of 1,235 Btus per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit at the East Dry Creek, Cavalry, Bent-Wagon Trail and Fluke Meter Stations for quantities not to exceed 1,000 Dth/d at each location and at the Kiowa Meter Station for quantities not to exceed 4,000 Dth/d.
- (g) Transporter may accept Gas with a water vapor of no more than 7 pounds per million cubic feet into the Enterprise Lateral (running from the Enterprise gathering facilities to the BP Wattenberg Plant), provided the Gas is subsequently processed at the BP Wattenberg Plant and meets the Section 3.1 (a) (v) specification after processing and upon reintroduction into CIG's facilities.
- (h) Transporter may accept Gas with a Gross Heating Value of not less than 950 Btus per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit into the Powder River Lateral, provided the Gas is Delivered to a Powder River Lateral location or Transporter is able to blend the gas to meet downstream gas quality delivery requirements at non-Powder River Lateral delivery points.
- (i) In addition, Transporter may accept any Gas that does not meet the specifications set forth in Section 3.1 on a short term basis for operational reasons which may include plant start-ups, plant upsets, or line freeze-offs.
- (j) Gas Tendered to Transporter south of the Keyes Station shall not contain more than 500 parts per million (0.05 percent) by volume of oxygen at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit. However, Transporter may accept Gas Tendered that contains no more than 2000 parts per million (.200 percent) by volume of oxygen at such Point(s) of Receipt if Transporter, in its reasonable discretion and judgment, determines that such acceptance will not interfere with Transporter's obligations to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

3.2 Specification Exemptions (continued)

- (k) Gas Tendered on the 8-inch transmission line between Keyes Station and Campo (Transporter's line designation 3C) and the 16-inch transmission line between Sturgis Station and Keyes Station (Transporter's line designation 40A) shall have a Gross Heating Value of no lower than 400 Btu's per standard cubic foot. However, Transporter may accept Gas Tendered with a Gross Heating Value lower than 400 Btu's per standard cubic foot if Transporter, in its reasonable discretion and judgment, determines that such acceptance will not interfere with Transporter's obligations to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.
- (l) Transporter may accept up to 45,000 Mcf per day of Gas with a hydrocarbon dew point in excess of 25 degrees Fahrenheit on Transporter's Segments 134, 136 and 138 as shown on Transporter's electronic bulletin board, provided there is an adequate supply of flowing Gas with a hydrocarbon dew point less than 25 degrees Fahrenheit available for commingling such that Transporter, in its reasonable discretion and judgment, determines that the commingled Gas stream will not interfere with Transporter's obligations to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

3.3 Waiver of Quality Specifications. Transporter, in its reasonable discretion and judgment, may waive one or more of its gas quality specifications at any Point of Receipt to accept gas that does not conform to the quality specifications set forth in Sections 3.1 and 3.2, if Transporter determines that such acceptance will not interfere with Transporter's ability to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

3.4 Failure to Meet Specifications. In the event that Gas Tendered hereunder fails to meet the specifications in Section 3.1 and Transporter has not agreed to accept gas pursuant to Sections 3.2 or 3.3, the measuring Party shall notify the other Party of such failure. Transporter may refuse to accept such Gas. The Party Tendering such Gas hereunder shall indemnify the receiving Party for any injury, damage, loss, or liability caused by such Gas, except to the extent Transporter knowingly and willingly accepts such Gas.

3.5 Specification of Gas Delivered or Received on the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline, and/or through the Supporting Air Blending Operations.

- (a) Transporter shall operate, maintain, and repair its existing, certificated air blending facilities in a manner consistent with good business practices, and standards of reliability and performance generally followed by FERC jurisdictional natural gas pipeline operators, to ensure that all Gas Delivered by Transporter, during normal operating conditions, from the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline has a Wobbe number in the range of 1,195 to 1,285.
- (b) If during atypical operating conditions (such as severe cold weather) Transporter is unable to maintain Wobbe numbers within a range of 1,195 to 1,285, then Transporter may temporarily extend the Wobbe range for the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline up to 1,320. If the Wobbe numbers for the Valley Line, the Derby Lake Point of Delivery and the 9B pipeline reach 1,320 and Transporter is unable to maintain Wobbe numbers at 1,320, then Transporter shall allocate air deliveries such that the Wobbe number for the Valley Line is maintained at 1,320 while Transporter may extend the Wobbe range for the Derby Lake Point of Delivery and the 9B pipeline up to 1,352.
- (c) During any period in which Wobbe numbers exceed 1,285, Transporter shall utilize the full capability of its existing, certificated air blending facilities to return the Wobbe to a range of 1,195 to 1,285 as soon as reasonably practicable. If Transporter anticipates that atypical operating conditions (such as severe cold weather) may necessitate Wobbe numbers exceeding 1,285, then Transporter shall provide prompt notice to Shippers and Operators via a posting on Transporter's EBB; and if Transporter actually experiences Wobbe numbers exceeding 1,285, then Transporter shall provide prompt notice to Shippers and Operators via email or other electronic means.
- (d) Upon the mitigation of atypical operating conditions (such as severe cold weather), Transporter shall first, if applicable, reduce the Wobbe number for the Derby Lake Point of Delivery and the 9B pipeline to 1,320, and then reduce the Wobbe numbers on the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline to a range of 1,195 to 1,285.
- (e) Transporter may refuse to accept gas on the Valley Line and the 9B pipeline having a Wobbe number outside the acceptable range of 1,195 to 1,285 in order to meet Transporter's obligations under this Section 3.5.
- ~~(a) All Gas Delivered by Transporter on the Valley Line may be blended with air and shall have a Wobbe number in the range of 1,185 and 1,285. However, should situations occur on an hourly basis such that Transporter is unable to maintain the Wobbe within the above-specified range, Shippers agree to extend such ranges up to 1,310. Transporter will endeavor to keep such hourly occurrences to a minimum and to return the Wobbe to within the specified range as soon as possible. Transporter shall~~

~~use its best efforts to keep the Wobbe within the acceptable range of 1,185 to 1,285. Shippers receiving Gas with a Wobbe outside the acceptable of 1,185 and 1,285 shall be notified within 30 minutes of the discovery of the excess variation. Any Gas received by Transporter on the Valley Line shall have a Wobbe number within the acceptable range of 1,185 and 1,285 at all times.~~

~~(b) — All Gas Delivered by Transporter on High Plains at the Derby Lake Point of Delivery and on the 9B pipeline may be blended with air and shall have a Wobbe number in the range of 1,185 and 1,285 as much of the time as possible. If the transporter is unable to maintain the Wobbe within the acceptable range of 1,185 and 1,285, then the Transporter will maintain a Wobbe within the acceptable range of 1,185 and 1,338 on a daily basis. However, should situations occur on an hourly basis such that Transporter is unable to maintain the Wobbe within the above specified range, Shippers agree to extend the maximum Wobbe up to 1,352, to allow required quantities to be Delivered. Transporter will endeavor to keep such occurrences to a minimum and to return the Wobbe to within the acceptable range of 1,185 to 1,285 as soon as possible. Transporter shall use good faith efforts to operate the existing facilities to keep the Wobbe within the acceptable range of 1,185 to 1,285. Shippers receiving Gas with a Wobbe varying outside the acceptable range of 1,185 to 1,285 shall be notified of the discovery of the excess variation as soon as practicable.~~

- 3.6 Specification of Gas Delivered Requiring Wobbe numbers. All Gas Delivered by Transporter to the following delivery points shall be at a Wobbe number within the acceptable range of 1,240 and 1,398: Carpenter Burns, Cheyenne, Pine Bluffs, Terry, Green Valley, First Creek, Second Creek, Ft. Lupton, Greeley Group and Brush Group Delivery Points.
- 3.7 Quality Tests. The Party operating the measuring equipment, using approved standard methods in general use in the Gas industry, shall cause adequate tests to be made to determine the quality of the Gas Tendered hereunder. Such tests shall be made at intervals frequently enough to ensure that the Gas conforms to the specifications hereof.

3. QUALITY

- 3.1 Specifications. Unless otherwise agreed pursuant to Sections 3.2 and 3.3 below, Shipper warrants that Gas Tendered hereunder at each Point of Receipt and Point of Delivery will comply with the following quality specifications:
- (a) At a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit, such Gas shall not contain more than:
 - (i) .25 grain of hydrogen sulphide per 100 cubic feet,
 - (ii) 5 grains of total sulphur per 100 cubic feet,
 - (iii) 10 parts per million (0.001 percent) by volume of oxygen; however, this oxygen quality specification shall not apply at Point(s) of Delivery on the Valley Line and its supporting blending operations (see Section 3.5 below for oxygen specifications applicable to the Valley Line and its supporting blending operations,)
 - (iv) 3.0 percent by volume of carbon dioxide,
 - (v) 7 pounds of water vapor per million cubic feet at Point(s) of Receipt and Point(s) of Delivery within the states of Kansas, Oklahoma, and Texas and 5 pounds of water vapor per million cubic feet in all other states.
 - (b) Shipper warrants that all Gas Tendered will be commercial in quality and shall be free from any foreign material such as solids, lubricating oils, sand, dirt, dust, gums, crude oil, water or hydrocarbons in the liquid phase, metal particles, and other objectionable substances, including, but not limited to, polychlorinated biphenyls, which may be injurious to pipelines, people, property, or the environment which may interfere with its Transportation or makes the Gas unmarketable or unacceptable for Delivery from Transporter's transmission system.
 - (c) Shipper warrants that all Gas Tendered will have a Gross Heating Value of not more than 1,235 Btu's nor less than 968 Btu's per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit.
 - (d) Shipper warrants that the temperature of the Gas Tendered will not exceed 120 degrees Fahrenheit; provided, however, if Transporter is required to dehydrate the Gas at the Point(s) of Receipt, then the temperature of such Gas shall not exceed 90 degrees Fahrenheit.

3.1 Specifications (continued)

- (e) Shipper warrants that the hydrocarbon dew point of all Gas Tendered will not exceed a temperature of 25 degrees Fahrenheit at any pressure between 100 p.s.i.a. and 1,480 p.s.i.a. as calculated from the Gas composition.

Notwithstanding Sections 3.1 through 3.3, Transporter shall not be required to receive Gas at any Point of Receipt which is of a quality inferior to that required by Shipper or a third Party at any Point of Delivery under the Agreement. Transporter shall not be liable to Shipper or any third Party for any damages incurred as a result of Transporter's refusal to receive Gas as a result of this provision.

3.2 Specification Exemptions. Transporter, in its reasonable discretion and judgment, may accept Gas that does not conform to the quality specifications in Section 3.1 but meets the conditions set forth below, provided Transporter determines that such acceptance will not interfere with Transporter's ability to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

- (a) Transporter may accept Gas with no more than 2000 parts per million (.200 percent) by volume of oxygen at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit at any Point(s) of Receipt.
- (b) Transporter may accept Gas with a hydrocarbon dew point in excess of 25 degrees Fahrenheit at any pressure between 100 p.s.i.a. and 1,480 p.s.i.a. as calculated from the Gas composition; provided that the Gas is subsequently processed at the BP Wattenberg, Regency Lakin, Mocane, CIG Rawlins, Williams Field Service Echo Springs or DCP Roggen plants. However, the Gas must meet the Section 3.1(e) specification after processing at these plants and upon reintroduction into CIG's mainline facilities.
- (c) Transporter may accept Gas with a water vapor content in excess of 7 pounds per million cubic feet; provided that the Gas is subsequently processed within the Regency Lakin and Mocane plant. However, the Gas must meet the Section 3.1(a)(v) specification after processing at this plant and before reintroduction into CIG's mainline facilities.
- (d) Transporter may accept Gas with a hydrocarbon dew point in excess of 25 degrees Fahrenheit at any pressure between 100 p.s.i.a. and 1,480 p.s.i.a. as calculated from the Gas composition at the East Dry Creek, Cavalry, Bent-Wagon Trail and Fluke Meter Stations for quantities not to exceed 1,000 Dth/d at each location and at the Kiowa Meter Station for quantities not to exceed 4,000 Dth/d.

3.2 Specification Exemptions (continued)

- (e) Transporter may accept Gas with a Gross Heating Value in excess of 1,235 Btus per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit; provided that the Gas is subsequently processed at the BP Wattenberg, Regency Lakin, Mocane, CIG Rawlins, or DCP Roggen plants. However, the Gas must meet the Section 3.1(c) specification after processing at these plants and upon reintroduction into CIG's mainline facilities.
- (f) Transporter may accept Gas with a Gross Heating Value in excess of 1,235 Btus per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit at the East Dry Creek, Cavalry, Bent-Wagon Trail and Fluke Meter Stations for quantities not to exceed 1,000 Dth/d at each location and at the Kiowa Meter Station for quantities not to exceed 4,000 Dth/d.
- (g) Transporter may accept Gas with a water vapor of no more than 7 pounds per million cubic feet into the Enterprise Lateral (running from the Enterprise gathering facilities to the BP Wattenberg Plant), provided the Gas is subsequently processed at the BP Wattenberg Plant and meets the Section 3.1 (a) (v) specification after processing and upon reintroduction into CIG's facilities.
- (h) Transporter may accept Gas with a Gross Heating Value of not less than 950 Btus per cubic foot at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit into the Powder River Lateral, provided the Gas is Delivered to a Powder River Lateral location or Transporter is able to blend the gas to meet downstream gas quality delivery requirements at non-Powder River Lateral delivery points.
- (i) In addition, Transporter may accept any Gas that does not meet the specifications set forth in Section 3.1 on a short term basis for operational reasons which may include plant start-ups, plant upsets, or line freeze-offs.
- (j) Gas Tendered to Transporter south of the Keyes Station shall not contain more than 500 parts per million (0.05 percent) by volume of oxygen at a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit. However, Transporter may accept Gas Tendered that contains no more than 2000 parts per million (.200 percent) by volume of oxygen at such Point(s) of Receipt if Transporter, in its reasonable discretion and judgment, determines that such acceptance will not interfere with Transporter's obligations to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

3.2 Specification Exemptions (continued)

- (k) Gas Tendered on the 8-inch transmission line between Keyes Station and Campo (Transporter's line designation 3C) and the 16-inch transmission line between Sturgis Station and Keyes Station (Transporter's line designation 40A) shall have a Gross Heating Value of no lower than 400 Btu's per standard cubic foot. However, Transporter may accept Gas Tendered with a Gross Heating Value lower than 400 Btu's per standard cubic foot if Transporter, in its reasonable discretion and judgment, determines that such acceptance will not interfere with Transporter's obligations to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.
- (l) Transporter may accept up to 45,000 Mcf per day of Gas with a hydrocarbon dew point in excess of 25 degrees Fahrenheit on Transporter's Segments 134, 136 and 138 as shown on Transporter's electronic bulletin board, provided there is an adequate supply of flowing Gas with a hydrocarbon dew point less than 25 degrees Fahrenheit available for commingling such that Transporter, in its reasonable discretion and judgment, determines that the commingled Gas stream will not interfere with Transporter's obligations to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

3.3 Waiver of Quality Specifications. Transporter, in its reasonable discretion and judgment, may waive one or more of its gas quality specifications at any Point of Receipt to accept gas that does not conform to the quality specifications set forth in Sections 3.1 and 3.2, if Transporter determines that such acceptance will not interfere with Transporter's ability to: (1) maintain prudent and safe operation of Transporter's pipeline system and storage facilities, (2) ensure that such Gas does not adversely affect Transporter's ability to provide service to others, and (3) ensure that such Gas does not adversely affect Transporter's ability to Tender Gas for Delivery to a downstream pipeline or end-user.

3.4 Failure to Meet Specifications. In the event that Gas Tendered hereunder fails to meet the specifications in Section 3.1 and Transporter has not agreed to accept gas pursuant to Sections 3.2 or 3.3, the measuring Party shall notify the other Party of such failure. Transporter may refuse to accept such Gas. The Party Tendering such Gas hereunder shall indemnify the receiving Party for any injury, damage, loss, or liability caused by such Gas, except to the extent Transporter knowingly and willingly accepts such Gas.

- 3.5 Specification of Gas Delivered or Received on the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline, and/or through the Supporting Air Blending Operations.
- (a) Transporter shall operate, maintain, and repair its existing, certificated air blending facilities in a manner consistent with good business practices, and standards of reliability and performance generally followed by FERC jurisdictional natural gas pipeline operators, to ensure that all Gas Delivered by Transporter, during normal operating conditions, from the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline has a Wobbe number in the range of 1,195 to 1,285.
 - (b) If during atypical operating conditions (such as severe cold weather) Transporter is unable to maintain Wobbe numbers within a range of 1,195 to 1,285, then Transporter may temporarily extend the Wobbe range for the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline up to 1,320. If the Wobbe numbers for the Valley Line, the Derby Lake Point of Delivery and the 9B pipeline reach 1,320 and Transporter is unable to maintain Wobbe numbers at 1,320, then Transporter shall allocate air deliveries such that the Wobbe number for the Valley Line is maintained at 1,320 while Transporter may extend the Wobbe range for the Derby Lake Point of Delivery and the 9B pipeline up to 1,352.
 - (c) During any period in which Wobbe numbers exceed 1,285, Transporter shall utilize the full capability of its existing, certificated air blending facilities to return the Wobbe to a range of 1,195 to 1,285 as soon as reasonably practicable. If Transporter anticipates that atypical operating conditions (such as severe cold weather) may necessitate Wobbe numbers exceeding 1,285, then Transporter shall provide prompt notice to Shippers and Operators via a posting on Transporter's EBB; and if Transporter actually experiences Wobbe numbers exceeding 1,285, then Transporter shall provide prompt notice to Shippers and Operators via email or other electronic means.
 - (d) Upon the mitigation of atypical operating conditions (such as severe cold weather), Transporter shall first, if applicable, reduce the Wobbe number for the Derby Lake Point of Delivery and the 9B pipeline to 1,320, and then reduce the Wobbe numbers on the Valley Line, the Derby Lake Point of Delivery, and the 9B pipeline to a range of 1,195 to 1,285.
 - (e) Transporter may refuse to accept gas on the Valley Line and the 9B pipeline having a Wobbe number outside the acceptable range of 1,195 to 1,285 in order to meet Transporter's obligations under this Section 3.5.
- 3.6 Specification of Gas Delivered Requiring Wobbe numbers. All Gas Delivered by Transporter to the following delivery points shall be at a Wobbe number within the acceptable range of 1,240 and 1,398: Carpenter Burns, Cheyenne, Pine Bluffs, Terry, Green Valley, First Creek, Second Creek, Ft. Lupton, Greeley Group and Brush Group Delivery Points.

- 3.7 Quality Tests. The Party operating the measuring equipment, using approved standard methods in general use in the Gas industry, shall cause adequate tests to be made to determine the quality of the Gas Tendered hereunder. Such tests shall be made at intervals frequently enough to ensure that the Gas conforms to the specifications hereof.