XTO ENERGY

Mr. Matt Lepore
Director
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

February 5, 2015

Re: Request for Variance from Rule 1101.e.(1) in Piceance

Dear Director Lepore,

Pursuant to Colorado Oil and Gas Conservation Commission (COGCC) Rule 502.b.(l), XTO Energy, Inc. (XTO) hereby requests a variance from the annual pressure testing requirements of COGCC Rule 1101.e.(l) as such rule relates to flowlines in XTO's Piceance production area. Rule 1101.e.(1) requires that:

> Before operating a segment of flowline it shall be tested to maximum anticipated operating pressure. In conducting tests, each operator shall ensure that reasonable precautions are taken to protect its employees and the general public. The testing may be conducted using well head pressure sources and well bore fluids, including natural gas. Such pressure tests shall be repeated once each calendar year to maximum anticipated operating pressure, and operators shall maintain records of such testing for Commission inspection for at least three (3) years.

Only flowline segments operating at greater than 15 psig must be tested, per COGCC Rule 1101.e.(2).

This letter is consistent with communications between XTO and COGCC staff during a September, 2013 meeting and field visit. This letter also supersedes XTO's June 24, 2014 variance request and reflects updates as requested by your staff in November, 2014.

The information that follows explains in detail how XTO meets the intent of the annual pressure testing required by Rule 110l.e.(l) by way of its proactive monitoring and mitigation program. That program goes beyond annual pressure testing requirements, and accordingly it is better suited to protecting the public health, safety and welfare, the environment, and wildlife.

The effectiveness of XTO's proactive monitoring and mitigation program is substantiated by Piceance spill statistics. Volume releases related to flowlines in Piceance are below the average produced water spill performance in the State of Colorado by a factor of ~13. Moreover, these releases have only occurred on produced water disposal flowlines, not on production flowlines. XTO's frequency of spills related to flowlines is less than one third of the occurrence rate presented in the COGCC "Risk-Based Inspections" report (February, 2014).

Additionally, the following information demonstrates that the operation and configuration of XTO's flowlines in Piceance makes compliance with Rule 1101.e.(1) as written unduly burdensome. The pressure testing requirement also introduces spill risk and would increase fugitive emissions. Furthermore, there are potential regulatory, permitting and right-of-way access issues for modifications required to make pressure testing flowlines possible.

Piceance Flowline Overview

XTO operates approximately 50 miles of carbon steel, flexsteel (double walled), and fiberspar lines that transport water, natural gas and condensate within its Piceance production area. The majority of these lines are less than 12 years old. The proactive monitoring program, proactive mitigations and safety systems that monitor, protect and maintain line integrity are addressed under the "Best Management Practices" (BMPs) section of this letter.

On producing well pads, high-pressure three phase fluids flow in partially buried steel flowlines from the wellhead to the choke (or choke manifold) and continue mostly above ground in insulated steel lines to the gas processing unit (GPU). The flowline segments downstream of the chokes are subject to the highest risk of being eroded or "cut out" due to pressure drop. The above ground installation of these lines allows for daily visual inspection on producing wells.

From the GPU, gas is carried in steel lines and metered upstream of the tie-in to the gas gathering system. Per the 100 Series Definitions, the gas gathering lines are not flowlines because those lines are downstream of "the gas metering equipment". However, BMPs similar to those for flowlines are in place on the gas gathering lines.

Upon exiting the GPU, liquids (condensate and produced water) are metered and loaded via automated transfer valves into the Combined Liquids Line (CLL) flowline for additional processing and separation at central processing facilities. Automated transfer valves (or dump valves) are located inside the GPU building to allow for visual inspection of lines immediately downstream of the valves, and a majority of locations have secondary containment integral to the GPU building. The CLL is a combination of flexsteel and fiberspar lines from immediately off well locations down to the valley, where the main trunk of the CLL is steel.

After further separation, produced water is pumped into the Produced Water Distribution and Disposal (PWDD) flowline system. The PWDD pipeline system is a loop system that allows produced water to be injected in multiple disposal wells, the Love Ranch Pond, or well pads for completion activities. The construction of the PWDD lines are similar to the CLL, where there is a main steel line in the valley that transitions to a combination of flexsteel and fiberspar lines up on top of the mesa where water is distributed to the disposal wells.

Figure 1 on the following page provides a simplified graphic of the typical system configuration described above.

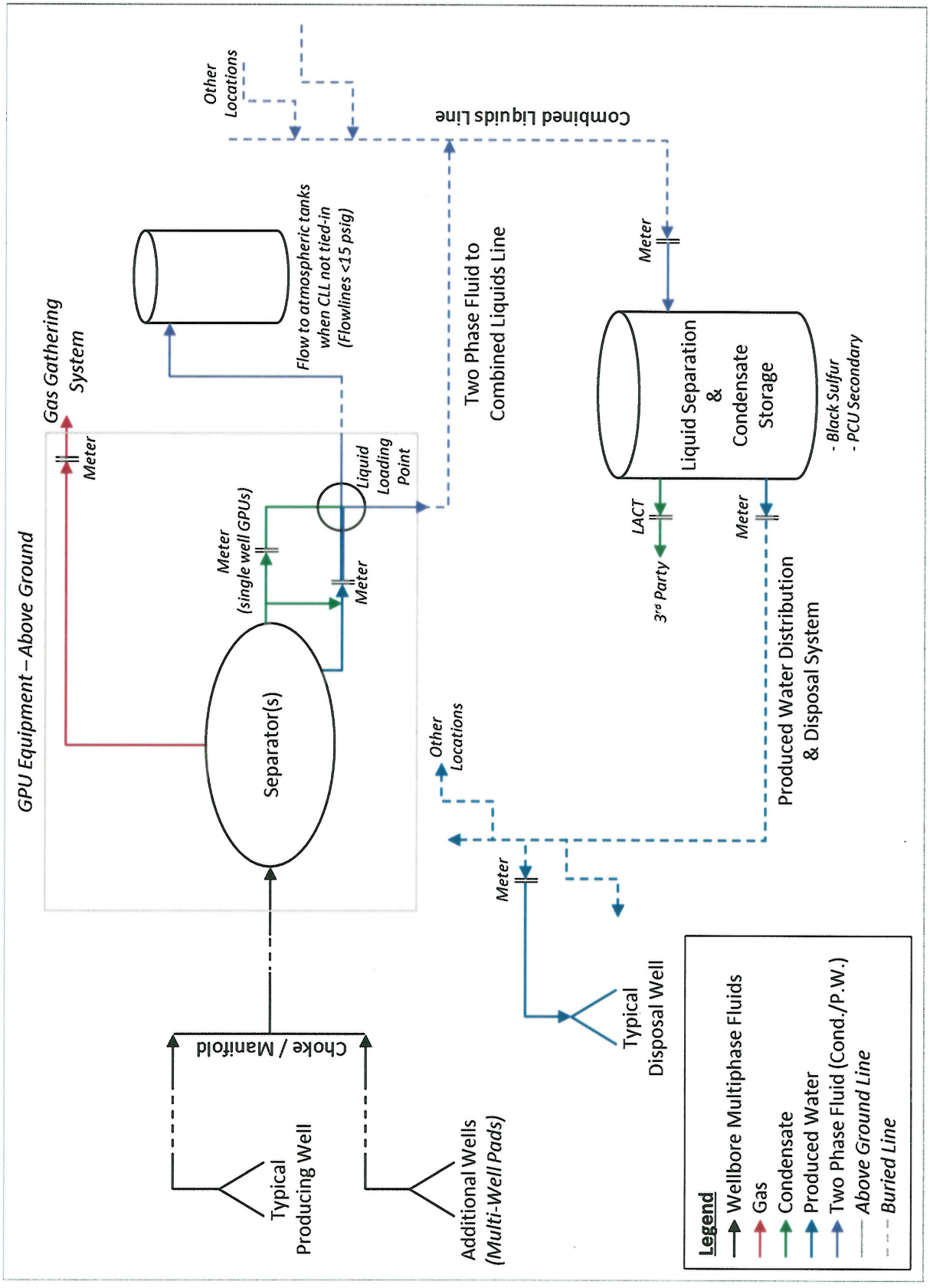

Figure 1 - Simplified XTO Piceance Flow Diagram (Typical Pad)

Piceance Spill History (Last Five Years)

Since risk exposure is a function of probability and consequence, it is important to understand the likelihood that an event will occur and the consequences resulting from that event. XTO's BMPs have maintained a low failure frequency and low consequence for flowline spills in Piceance, which are the key reasons why XTO's Piceance flowlines have low risk exposure. Figure 2 below summarizes the reportable flowline and off well pad flowline spills for Piceance over the past five years, which helps demonstrate the low risk exposure of XTO's Piceance operations. In addition, there are no flowlines in 317B designated areas in XTO's Piceance field.

Regarding the low failure frequency, only three spills over the past five years were related to off well pad flowlines, which is a very low rate given the roughly 50 miles of flowlines XTO operates in this area. All of these spills were produced water from the PWDD system, with none on producing well site flowlines/dump lines or on the CLL. In total, Piceance operations had 25 reportable spills over the last five years, with only 12% of spills from flowlines. This is in contrast to the COGCC "Risk-Based Inspections" report which found that 41% of Colorado spills are from "flowlines" and "pipelines".

Regarding consequences of flowline failures, there have been no crude or condensate spills related to flowlines over the last five years. All flowline spills were low volume produced water discharges from the PWDD, which had a relatively low environmental consequence. The total volume released in the three spills equates to a percentage of production spilled of only 0.0003%. This is 13-fold better performance than the overall produced water spill performance for Colorado in 2013 (0.004%). Additionally, if there were to be a spill on the CLL, there are relatively low consequences. The average condensate throughput of the CLL is only 3% of the volume, with the remainder being produced water.

Figure 2 – XTO Piceance Reportable Flowline Spills, 5 Years History

Date	Site	Material Spilled	Spill Vol. (bbls)	Cause	Mitigation
8/22/2014	PCU T35X-11G	Prod.Water	1.7	Leak in PWDD line	Damaged section of line replaced with flexsteel
2/4/2013	PWDD line (by Love 8)	Prod.Water	3.0	Two pin holes in PWDD line	Damaged section of line was replaced and flowline integrity verified via smart pig survey
4/4/2012	PCU T23-18G	Prod.Water	38.57	PWDD pump PSV 3/8" tubing failed	Increased surveillance and installed level control inside secondary containment with alarm and emergency shutdown

Implications of Pressure Testing at Piceance

XTO's Piceance operations were not designed and built with the intention of utilizing a regime of frequent pressure testing as provided in Rule 1101.e.(1). The current and historic practice of flowline pressure testing at Piceance consists of the industry standard practice of hydrostatically testing on initial installation, or after modifications, which ensures integrity prior to placing lines in service. Because of the way the system is constructed, pressure testing of XTO's Piceance flowlines during ongoing operations would be unduly burdensome. Moreover, conducting these annual pressure testing activities results in increased risk exposure to spills, and will increase fugitive emissions.

While there are some common themes, there are key differences between pressure testing well pad flowlines and off well pad flowlines. Therefore the two will be addressed separately herein.

Well Pad Flowlines

- All well pad flowlines transport multi-phase fluids. To be able to accurately interpret pressure test results, the lines must be hydrostatically tested.
- In order to hydrostatically test flowlines, they must be purged. Purging the lines introduces the risk of a discharge of liquids to the environment. It also requires venting of natural gas to atmosphere, generating fugitive emissions.
- Well pad flowlines are generally not setup with double block and bleed valve configuration. Flowlines will have to be disconnected in strategic locations and blinds installed to reduce the chance of spurious failed pressure tests from valves not adequately sealing.
- Pressure testing may require some off-pad surface disturbance to access isolation points, and there are potential external interface issues affecting XTO's ability to excavate.
    - BLM - ROW access to excavate and modify/isolate flowlines
        - Surveys for threatened/endangered species
        - Noxious weed surveys and vegetative monitoring
    - Rio Blanco County - General building permits
        - Pipeline permits for flowline modifications
    - CDPHE - Dewatering permits for excavations near groundwater
        - Stormwater plan modifications for any surface disturbance
    - Army Corps of Engineers - Permits for disturbance in wetlands areas
    - Surface access rights from private landowners
- Many pads are located in close proximity to threatened/endangered plant species, sage grouse habitat and wetlands, which may constrain or prohibit XTO's ability to disturb surface. Surface disturbance may be required to access and modify flowlines in order to pressure test.

- Disturbance will impact areas that have been successfully reclaimed, requiring subsequent reclamation.
- XTO's Piceance operations consist of roughly 360 individual wells and approximately 80 GPUs, which makes the above noted activities a burdensome and costly exercise.
- Hydrostatically testing GPUs would require shutting-in production, resulting in lost revenue, including royalty payments.

Off Well Pad Flowlines (CLL and PWDD)

- Off well pad flowlines are generally not setup with double block and bleed valve configuration. Flowlines would be disconnected in strategic locations and blinds installed to reduce the chance of spurious failed pressure tests from valves not adequately sealing.
- The off well pad flowlines are a complex network of small lines and trunk lines, and would require many additional locations to be isolated (aside from at existing valves).
- Pressure testing will require surface disturbance to access or construct isolation points, and there are potential external interface issues affecting XTO's ability to excavate. These external interface issues are the same as those listed under the "Well Pad Flowlines" section.
- The majority of off well pad flowlines are buried and located in close proximity to threatened/endangered plant species, sage grouse habitat and wetlands, which may constrain or prohibit XTO's ability to disturb surface. Surface disturbance maybe required to access and modify flowlines in order to pressure test.
- Disturbance will impact areas that have been successfully reclaimed, requiring subsequent reclamation.
- XTO's Piceance off well pad flowlines are extensive, making the above noted activities a burdensome and costly exercise.
- Combined Liquids Line (CLL) specific issues:
    - Hydrostatically testing off well pad flowlines would require shutting-in the entire field, resulting in substantial lost revenue, including royalty payments. The CLL transports multi-phase fluids. To be able to accurately interpret pressure test results, the line must be hydrostatically tested.
    - In order to hydrostatically test, the CLL must be purged. Purging the lines introduces the risk of a discharge of liquids to the environment. It also requires venting of residual natural gas to atmosphere, generating fugitive emissions.

Best Management Practices

As previously noted, XTO has a proactive monitoring and mitigation program specific to its Piceance operations. This program, as listed below, is effectively a series of BMPs that ensure flowlines maintain integrity and prevent or identify spills in a manner more timely than conducting annual pressure tests. Collectively these BMPs mitigate the minimal environmental and safety risk associated with operating flowlines in the Piceance area.

- **Pressure test new flowlines, or modified segments of flowlines, prior to operation**
  - All new flowlines, or modified segments of flowlines, are hydrostatically tested to a minimum of 100% of the manufacturer's specified maximum allowable operating pressure prior to entering service.

- **24 hour monitoring of real-time pressure readings by technicians qualified to respond**
  - The Piceance control room is a monitoring center that continuously receives pressure and flow data from remote transmitting units for various types of equipment operating in the field, including flowlines.
  - The control room is staffed 24 hours per day, 7 days per week, and has the ability to notify Operators in the event of an alarm or anomaly. Operators are also active in the field 24 hours per day, 7 days per week.
  - The control room Operator can also take action to close shut down valves on major flowlines if necessary.
  - Pressure transducer accuracy is regularly checked with a manual gauge. Calibrations and replacements of transducers are conducted as necessary.

- **Supervisory Control and Data Acquisition (SCADA) system targets set to trigger alarms before significant events occur**
  - Set points include the following:
    + High/low pressure
    + High/low flow rate
    + High/low level
  - Set points are based on line operating pressures and ratings, which vary throughout the field and are fit for each application.
  - Emergency shut-in systems, or safety systems, are function checked twice per year to ensure there are no issues.
  - Third party pressure relief valve (PRV) testing is conducted every two years.

- **Look-listen "walk-the-line" inspections of flowlines**
  - Walking the line typically consists of look, listen and smell observations.
  - On producing well pads, qualified Operators inspect flowlines daily.
  - Where producing wells are shut-in, Operators inspect flowlines on a weekly basis.
  - Off well pad flowlines are inspected two times per year.
  - Flexsteel lines have double walls and test points at surface to allow monitoring of the annular space.

- **Daily chemical pump maintenance to ensure adequate volumes of inhibitors are delivered and weekly verification of chemical injection rates by third party**
  - Flowlines are protected with corrosion inhibitor and biocide to mitigate corrosion and subsequent steel pipe wall loss.
  - Weekly injection rate verifications confirm that chemicals are injected as designed.

- **Third party monthly water sample testing to monitor chemical treatment program**
  - Fluids are sampled at strategic locations along flowlines and tested to ensure that chemical injection rates are maintaining adequate levels.

- **Third party corrosion coupon monitoring on flowlines**
  - Corrosion coupons are removable samples identical to the flowline material that can be measured for corrosion rates that are indicative of flowline corrosion rates.
  - The coupons provide valuable measurements regarding the effectiveness of the chemical treatment program.
  - There are approximately 350 coupons located on flowlines throughout the field.

- **Impressed current cathodic protection (ICCP) on all steel flowlines**
  - Cathodic protection mitigates external corrosion on fusion bond epoxy (FBE) coated steel flowlines.
  - 16 surface and deep anode beds throughout the field.
  - Rectifier readings checked every two months to ensure adequate protection.

Summary

All of the above information supports XTO's case that the Piceance operation is low risk as it pertains to flowlines. XTO's Piceance excellent spill statistics reinforce the benefits of XTO's proactive monitoring and mitigation program at Piceance, over the benefits of annual pressure testing pursuant to COGCC Rule 1101.e.(1). This program provides a higher degree of protection and integrity for flowlines than the annual pressure testing requirement in Rule 1101.e.(1). The XTO approach provides 365 days per year of protection, whereas the annual pressure testing only confirms integrity for the day the pressure test is executed.

In addition, the Rule 1101.e.(1) annual pressure testing requirement is unduly burdensome since XTO's Piceance flowlines are not configured to pressure test on an ongoing basis. The pressure testing requirement also increases the risk of fluid spills and increases the volume of fugitive emissions versus the current operational baseline.

At this time, XTO respectfully requests written approval of this variance request. XTO also requests that this variance apply to new flowline segments, so long as such segments are covered by applicable BMPs listed herein.

If you or your staff should have any questions or concerns, please feel free to contact me at your earliest convenience at (303) 397-3697.

Regards,

Matthew Deveau
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XTO Energy, Inc.

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