

**Statement of Basis, Specific Statutory Authority, and Purpose  
New Rules and Amendments to Current Rules of the Colorado Oil and Gas  
Conservation Commission, 2 CCR 404-1**

**Cause No. 1R Docket No. 171200767  
Flowline Rulemaking**

This statement sets forth the basis, specific statutory authority, and purpose for new rules and amendments (“Flowline Rules”) to the Colorado Oil and Gas Conservation Commission (“Commission”) Rules of Practice and Procedure, 2 CCR 404-1 (“Rules”). The Commission promulgated the Flowline Rules on February 13, 2018.

In adopting amendments to the Rules, the Commission relied upon the entire administrative record for this Rulemaking proceeding, which formally began on October 15, 2017, when the Commission submitted its Notice of Rulemaking to the Colorado Secretary of State.

**Background**

On August 22, 2017, Governor John Hickenlooper announced the state’s seven policy initiatives that followed the Commission’s review of oil and gas flowline operations, and included stakeholder meetings. The Commission’s swift review was in response to the tragic home explosion in Firestone, Colorado on April 17, 2017, that killed two people and injured a third. The Governor called for the review on May 2, 2017, after the Frederick Firestone Fire Protection District completed its investigation into the home explosion. The investigation identified an abandoned oil and gas flowline connected to an active well as the cause of the explosion. The Rulemaking implements changes to the Commission’s flowline and safety rules in accordance with the state’s review and Governor’s announcement.

**Stakeholder and Public Participation.**

On September 8, 2017, the Commission issued a Rulemaking scoping document that identified proposed changes to existing flowline rules. The scoping document solicited stakeholders to submit comments regarding the scope of the proposed flowline Rulemaking on or before September 29, 2017. Commission staff conducted stakeholder meetings on September 21 and 25, 2017; which more than 50 stakeholders attended, including citizens, local government representatives, and industry representatives. In addition to verbal comments during these meetings, the Commission received written comments throughout the stakeholder process.

The Commission encouraged public participation in the Rulemaking by allowing the public to comment on the proposed rules in advance of and during three days of hearing. Persons or organizations desiring to do so could also participate in the Rulemaking as a party. Parties could submit prehearing statements and comments, including alternative rules or amendments, and respond to the prehearing

statements and comments submitted by other parties. Additionally, the public was invited to attend a Commissioner work-session with Commission staff at which staff explained technical aspects of the definitions in the proposed Flowline Rules.

### **Statutory Authority.**

The Commission's authority to promulgate amendments to the Rules is derived from the following sections of the Colorado Oil and Gas Conservation Act ("Act"), §§ 34-60-101 - 130, C.R.S.:

- Section 34-60-105(1), C.R.S. (Commission has the power to make and enforce rules necessary to enforce the provisions of the Act);
- Section 34-60-106(2)(a), C.R.S. (Commission has the authority to regulate the drilling, producing, and plugging of wells and all other operations for the production of oil or gas);
- Section 34-60-106(2)(d), C.R.S. (Commission has authority to regulate "Oil and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, including protection of the environment and wildlife resources, taking into consideration cost-effectiveness and technical feasibility.");
- Section 34-60-107, C.R.S. (Commission has duty to regulate oil and gas operations so as to prevent the waste of oil and gas); and
- Section 34-60-108, C.R.S. (Commission has authority to prescribe rules and procedures to adopt rules).

### **Identification of New and Amended Rules.**

In response to the Governor's directive to review its flowline regulations, consistent with its statutory authority and its legislative mandates, and in accord with the administrative record, the Commission added or amended the following Rules:

- 100-Series Rules: definitions of Breakout Tank, Crude Oil Transfer Line, Domestic Tap, Flowline, Wellhead Line, Production Piping, Production Line, Dump Line, Manifold Piping, Process Piping, Off-Location Flowline, Peripheral Piping, Produced Water Flowline, Gathering Line, Grade 1 Gas Leak, Isolation Valve, Lockout, Maximum Anticipated Operating Pressure, Pipeline, Produced Water Transfer System, Riser, Tagout and Tagout Device.
- 300-Series Rules: 312, 313A, 313B, and 328.d.;
- 600-Series Rules: 602;

- 700-Series Rules: 711;
- 1100-Series Rules; and
- The Commission also adopted conforming or clarifying changes to Rules affected by flowline or related changes. 100-Series (Blowdown Pits, Oil and Gas Facility, Oil and Gas Operations, Plugging and Abandonment, Production Facility, Production Pits, and Special Purpose Pits); 303.b.; 317B; and 907.

### **Overview of Purpose and Intent.**

On September 11, 2017, the Commissioners directed staff to implement the two announced policy initiatives that require Commission rulemaking. The state's seven policy initiatives Governor Hickenlooper announced were:

- Strengthening the Commission's Flowline regulations;
- Enhancing the 8-1-1 "one-call" program;
- Creating a nonprofit orphan well fund to plug and abandon orphan wells and provide refunds for in-home methane monitors;
- Prohibiting future domestic gas taps;
- Creating a technical workgroup to improve safety training;
- Requesting peer-review of certain Commission regulations; and
- Exploring an ambient methane leak detection pilot program.

Of these seven policy initiatives, the Commission can address two through rulemaking: strengthening the flowline regulations and improving the uniformity of operator participation in the 8-1-1 "one-call" program. In addition, the Commission can complement the Governor's domestic tap initiative by improving safety oversight of oil and gas operations through the requirement of domestic tap reporting.

First, the Governor's call to update the Commission's flowline regulations stems from the information received by the Commission in response to its May 2, 2017 Notice to Operators Flowlines or Pipelines Series - 1100 Series Rules (NTO) as well as the Commission's own review of its flowline rules. The NTO required operators to, over the course of two months: identify, locate, and pressure test certain flowlines and submit that information to the Commission; and identify, mark, and lock out/tag out risers for abandoned flowlines and then, consistent with abandonment requirements, cut those risers to three-feet below grade. The Commission received new data on approximately 120,000 flowlines and associated risers, which data was the first step for the Commission to develop a relational database that uses flowline riser location

to interrelate oil and gas locations.

While operators were working through the NTO requirements and submitting data about flowlines during the summer of 2017, the Commission continued - with an elevated priority - its review of the flowline regulatory regime. Beginning in 2015, the Commission started reviewing its flowline program based upon recommendations contained within its 2014 Risk Based Inspections report prepared for the Colorado General Assembly. In 2015, the Commission established a Flowline Integrity Group within the Engineering Unit dedicated to enforcing the Commission's flowline regulations. The Commission has also reviewed its own and other state and federal rules regulating pipelines to ascertain areas where Colorado's flowline regulations could be improved. During this review, staff identified regulatory changes that the Commission adopted in Order 1R-103. However, not all of the changes identified in Order 1R-103 were incorporated into the Rules; this Rulemaking corrects that oversight. Thus, the changes adopted by the Commission in the Flowline Rules reflect the research and findings made since 2015, as well as input from the stakeholders received before and during the Rulemaking.

Second, the Commission intends to improve the uniformity of operator participation in the Utility Notification Center of Colorado (UNCC), Colorado's "one-call" or "8-1-1" program. This reflects an improved collaboration between the Commission, the UNCC, and operators. In the wake of the Firestone tragedy, many people asked that the Commission create a database that maps all flowlines in Colorado. During the course of stakeholder meetings, the opportunity to partner with UNCC became the Commission's preferred option for housing increased, more specific information about flowlines. Requiring operators to become Tier One members and to supply UNCC with digital information about an operator's belowground operations (i.e., vertical portions of wells and flowlines) provides an elegant, efficient, and effective option for a state-wide organization to host information about belowground oil and gas operations. UNCC has an existing database that citizens and businesses rely on every day when preparing to dig. The team at UNCC is uniquely prepared with the expertise, staff, and existing database to incorporate information from operators that may change week-to-week and provide the updated information to the people who most need it - property owners preparing to dig. Relying on UNCC to host this information also provides a centralized information source for all Colorado citizens, local governments, and businesses of all underground facilities-not just oil and gas exploration and production facilities. To enhance this collaboration, the Commission imposed increased requirements for operators' participation in the UNCC program.

The Commission also amended specific regulatory requirements in an effort to prevent fluid releases from pipelines and empower the Commission to respond in the event of an exploration and production fluid release. First, the Commission clarified and enhanced provisions related to its oversight of pipelines that transport crude oil, produced water and gas gathering lines. Second, the Commission included an additional method to gauge tanks that provides accurate and reliable data without

the need to open tank hatches, thereby minimizing fugitive emissions. Third, the Commission imposed specific requirements for valves on flowlines and crude oil transfer lines to enhance control and isolation of fluid movement within pipeline segments.

To aid implementation of the Flowline Rules, the Commission developed and approved a new Flowline Report, Form 44. Operators will submit a variety of notices and regulatory information required by the Flowline Rules to the Commission via the Form 44. In response to comments from multiple stakeholders, Commission staff will automatically send Form 44 registrations, which include pipeline and facility layout drawings, to the appropriate LGD to facilitate local government planning and any necessary coordination between the local government and the operator. Additionally, staff will post to the Commission's Daily Activity Dashboard notice of filing of Form 44s, which will further simplify public access to operator submitted pipeline registrations. The filed Form 44s will include the facility layout drawing, which depicts general facility information and will be available to the public. Confidential geophysical and geodatabase information will not be available to the public.

The amendments adopted by the Commission required conforming changes to existing Rules; those changes are embodied in the amended rules.

## **Amendments and Additions to Rules.**

### ***100 Series Rules: Amended Definitions.***

The definitions of “flowline” and “gathering line” were changed from technical, narrative descriptions to descriptions that reflect the different spheres of authority held by the Commission and the Colorado Public Utilities Commission (PUC) or the Pipeline and Hazardous Materials Safety Administration (PHMSA), a federal agency within the U.S. Department of Transportation. American Petroleum Institute Recommended Practice 80, Guidelines for the Definition of Onshore Gas Gathering Lines, 1st Edition, April 1, 2000, is an additional source of guidance to assist the Commission and interested stakeholders in determining jurisdiction between the Commission and PUC or PHMSA.

The Commission also added descriptions of different types of flowlines to better delineate differences in installation requirements and integrity management regimes for these various flowlines. Focused, technical stakeholder comments from the Colorado Petroleum Council and Colorado Oil and Gas Association were integral to the Commission's development of these definitions. The Commission's amendments distinguish between types of flowlines that exist on a single oil and gas location (“on-location flowlines”) and those that transport fluids between different locations (“Off-Location Flowlines”).

The Commission defined a “Produced Water Transfer System” separately from “Flowline” for purposes of registration and bonding. Unless otherwise specifically

stated in the Rule, “Produced Water Transfer System” is included in the definition of “Flowline.” A “Produced Water Transfer System moves produced water between different oil and gas locations, and is comprised of a series of Off-Location Flowlines. Notably, a “Produced Water Transfer System” is a network of interconnected off-location produced water flowlines emanating from multiple well sites or production facilities to a common destination point. These “Produced Water Transfer Systems” typically travel a distance exceeding 1-mile from the oil and gas location. The individual flowlines of a Produced Water Transfer System are subject to all flowline requirements, including installation, design, maintenance, integrity testing, and abandonment. Operators must also register new Produced Water Transfer Systems with the Commission prior to placing them in operation

The Commission also defined and adopted new rules for “Crude Oil Transfer Line,” meaning a pipeline that is not regulated by PHMSA, and which conveys crude oil, crude oil emulsion, or condensate from more than one well site or production facility to a separate, remote oil and gas location. To differentiate a Crude Oil Transfer Line from off-location flowlines that also may transport crude oil from a well to a separate, remote oil and gas location, Crude Oil Transfer Lines are those pipelines terminating at a production facility that has permanent storage capacity in excess of 25,000 barrels of crude oil or condensate or at a PHMSA regulated gathering line. The Commission adopted new rules to regulate the construction, operation, and other requirements of Crude Oil Transfer Lines. At present, no other state or federal agency regulates these pipelines; consequently and importantly, the new COGCC Crude Oil Transfer Lines fill this regulatory gap. The Commission based its Crude Oil Transfer Line regulations in significant part on rules adopted by the North Dakota Industrial Commission in November 2016.

The Commission also added a definition of “pipeline” to create a term that encompasses both flowlines, crude oil transfer lines, and gathering lines since some provisions in the Rules apply to all categories of pipelines.

Notably, the Commission added a definition of a Grade 1 Gas Leak. This definition is included to assist in the reporting of gas leaks to the Commission pursuant to the 1100 Series Rules. Additionally, the Commission added definitions to clarify terminology, such as riser, dump lines, isolation valve, and maximum anticipated operating pressure. These definitions are incorporated to assist the public understanding of oil and gas operations as well as operator compliance with the amended Rules.

### ***1100 Series Rules: Revised Flowline Regulations.***

The 1100 Series Rules were revised and reorganized to clearly delineate the life cycle of a flowline, from its registration with the Commission, through construction and installation, to integrity management and finally abandonment. In revising the

1100 Series, the following section changes were made:

- Rule 1101. Registration Requirements
- Rule 1102. Flowline and Crude Oil Transfer Line Requirements
- Rule 1103. Flowline and Crude Oil Transfer Line Valves
- Rule 1104. Integrity Management
- Rule 1105. Abandonment

The details contained within each of these sections is discussed below.

The Northwest Colorado Council of Governments (NWCCOG) commented that it would be helpful to local governments if a reference to existing Commission Rule 201 were to be included in the 1100 Series. Specifically, Rule 201 provides in relevant part that:

Nothing in these rules shall establish, alter, impair, or negate the authority of local and county governments to regulate land use related to oil and gas operations, so long as such local regulation is not in operational conflict with the Act or regulations promulgated thereunder.

Rule 201 applies to the amendments adopted in this rulemaking.

**1. *Rule 1101: Registration Requirements.***

The changes to Rule 1101 focused on gaining increased information about specific types of pipelines. The Commission required operators to register off-location flowlines. *See* Rule 1101. This regulation ensures the Commission will obtain data about new off-location flowlines similar to what was obtained about existing flowlines through the May 2<sup>nd</sup> NTO. When an operator registers a new off-location flowline, it must report GPS endpoints of risers, pipeline materials used, related locations (by COGCC Facility Number), and fluids conveyed by the pipeline. For all new off-location flowlines, operators must also include a geodatabase containing the pipeline alignment with the registration. The geodatabase includes geophysical data necessary for identifying the specific location of the pipeline. Operators must also update the registration with the line upon changes in alignment. *See* Rule 1101.a.(3). This information will continue to populate the relational database the Commission is creating to better inform staff, the public, and operators about the movement of exploration and production fluids.

Rule 1101 also requires operators to register off-location flowlines constructed prior to May 1, 2018. If, at the time of registration, an operator has a geodatabase containing the alignment of an off-location flowline constructed prior to May 1, 2018, the geodatabase must be submitted with the Form 44 Registration. If an operator

subsequently obtains or prepares a geodatabase containing the alignment of an off-location flowline constructed prior to May 1, 2018, that geodatabase must be submitted to the Commission via a Form 44. However, the Commission does not expect operators to create a geodatabase containing the pipeline alignment for off-location flowlines in existence prior to May 1, 2018.

The Commission made efforts to avoid unnecessary or duplicative registration, while ensuring that the public has greater information about the location of flowlines in their communities. For instance, an off-location flowline registered pursuant to 1101.c. as part of a produced water transfer system is excluded from 1101.a. requirements to avoid dual registration requirements. With respect to flowline location, Weld County and other stakeholders requested that local governments or surface owners receive more information about off-location flowlines registered with the Commission. In an effort to provide this information, the Commission now requires operators to record either the document itself or a memorandum or notice of such document that evidence a right of access or easement for an off-location flowline executed on or after May 1, 2018, with the office of the county clerk and recorder of the county where the lands are located.

Second, the Commission also required the registration of all known, discovered, or installed domestic taps. *See* Rule 1101.b. Stakeholders expressed some confusion about “discovered.” By using this term, the Commission requires operators to register domestic taps that the operator may discover (i.e., was unknown to the operator on May 1, 2018, but was installed prior to that date) during the course of its operations. In the furtherance of public safety associated with oil and gas operations, operators are required to report to the director the location of the point a domestic tap connects to a flowline or wellhead and the address of the location of where the tap delivers gas.

The Commission required operators to provide odorant upon installation until abandonment of all domestic taps installed after May 1, 2018. The Commission also imposed installation requirements for future domestic taps to ensure improved protection of public health, safety, and welfare and the environment. La Plata County raised this concern during the stakeholder process. While operators expressed concern that they have limited authority to compel compliance with the regulation, the Commission expects that an operator can, at a minimum, satisfy the regulation by notifying in writing the domestic tap owner of the requirements. Further, through contract provisions that require the surface owner to ensure installation in compliance with the rule, operators can demonstrate compliance with the regulation. The Commission does not regulate the safety and integrity of domestic taps. Rather, PHMSA requires the testing of all pressure regulating or similar devices on domestic taps every 3 calendar years. *See* 49 CFR § 192.740(a). This addresses some concerns raised to the Commission including Boulder County’s stakeholder comments.

Third, the Commission required operators to register a crude oil transfer line or



produced water transfer system before construction, and to update the registration with as-built information for the line or system and upon changes in alignment. *See* Rule 1101.c. This will provide the Commission with information about these pipelines or systems important to the Commission's oversight of oil and gas exploration and production activities in Colorado. Similar to the recording requirements established for off-location flowlines, the Commission imposed recording requirements for crude oil transfer lines and produced water transfer systems to ensure local governments and surface owners are aware of the location of these pipelines.

Finally, while there is no substitute for the information provided by UNCC to citizens and business preparing to dig, the Commission received testimony that in certain circumstances the unique needs of local governments and first responders may not be fully met by UNCC. For purposes of emergency management and planning, local governments and first responders may require more discrete location information for off-location flowlines, crude oil transfer lines and produced water transfer systems that is not readily available from UNCC or a Form 44's general facility layout drawing. Accordingly, the Commission will upon request and subject to a confidentiality agreement provide the local governmental designee the geodatabase information for off-location flowlines, crude oil transfer lines and produced water transfer systems within the jurisdiction he or she represents. The sole purpose for providing local governments with this geodatabase information is to aid in their emergency management and planning.

The Commission will maintain the confidentiality of the geodatabase information consistent with, and to the maximum extent allowed under the Colorado Open Records Act Colo. Rev. Stat. Ann. § 24-72-200.1, *et seq.* (CORA). The COGCC considers the geodatabase information to be critical infrastructure data and geophysical data, which CORA protects from public disclosure. *See* § 24-72-204(3)(a)(IV) C.R.S., and § 24-72-204(2)(a)(VIII)(A).

Consistent with the requirements of § 24-72-204(2)(a)(VIII)(A), when a local governmental designee seeks access to geodatabase information to aid in emergency management, the Commission will require prior written consent of the operator, unless the geodatabase information is already publicly available. This consent will be given through Form 44. The Commission, prior to releasing the geodatabase information, will request that the requesting local government execute a confidentiality agreement recognizing the geodatabase information is confidential, exempt from disclosure under CORA, and will be maintained by the local government as confidential.

The Commission appreciates local governments bringing to staff's attention the need for making the geodatabase information available for emergency management and planning. Sharing this information with local governments for emergency management and planning provides the public with further assurances that first responders have the information necessary to address potential emergencies in their communities.

## 2. **Rule 1102: Flowline and Crude Oil Transfer Line Requirements.**

The Commission adopted several new requirements or standards related to design, installation, repair, and maintenance of flowlines and crude oil transfer systems. See Rule 1102. As the Commission found during its review, having installation and construction standards that are more specific and that have been tested and established by third-parties would create a more uniform and improved regulatory regime as well as provide greater certainty for the regulated industry. To that end, the Commission included in the Flowline Rules industry standards that operators must follow when designing and installing their pipelines. Industry stakeholders supported using established third-party standards. The Commission intends that the rules, which apply to activities such as installation, design, repair, *etc.* and the corresponding record-keeping requirements, begin on the effective date. And while the Commission does not intend that an operator re-install an existing line to comply with Rule 1102, as existing segments or entire runs of pipeline are repaired or replaced operators must comply with Rule 1102. For example, 1102.a.(1) requires that materials for pipe and pipe components maintain structural integrity. Rule 1102.a.(1) does not require operators to remove and replace all existing pipe. However, when a segment of pipe is repaired or installed, that repaired or installed segment must comply with 1102.a. Rule 1102.j.(2) provides that flowlines and crude oil transfer lines in existence prior to May 1, 2018 that undergo “a major modification or change in service” after May 1, 2018, must comply with the applicable sections of the 1100 Series before bringing the pipeline back into service. The Commission expects that existing flowlines and crude oil transfer lines will comply with a majority of the 1102 requirements.

The table below is provided to aid operators in identifying those sections of 1102 that are applicable to repaired and replaced segments of pipelines. Unless otherwise specified in the Rules, the compliance date for the 1200 Series, and all of the 1100 Series Rules is May 1, 2018. For purposes of the table below, a “New” pipeline means a pipeline installed on or after May 1, 2018. “Existing” pipelines are pipelines in existence prior to May 1, 2018 that are in active use. As discussed below, a pipeline is in active use if it is holding pressure or flowing fluids.

<b>Rule</b>	<b>Pipeline Affected</b>
1102.a	New pipelines and upon the repair or replacement of existing pipelines
1102.b.	New pipelines and upon the repair or replacement of existing pipelines
1102.c.	New and existing
1102.d.(1)-(12)	New
1102.d. (1), (2), (5), (8) and (10)	Existing pipelines as repaired or

	replaced
1102.e.	New
1102.f.(1)-(3)	New
1102.f.(3)	Existing
1102.g.	New and existing pipelines
1102.h.	New
1102.i.	New and existing pipelines
1102.j.	New pipelines and upon the repair or replacement of existing pipelines
1102.k.(1)-(2)	New
1102.k.(2)	Existing
1102.l. (1)-(3)	New
1102.l. (1) and (3)	Upon the repair or replacement of existing pipelines
1102.m	New and existing
1102.n.	New and existing
1102.o.	New and existing

Some stakeholders expressed concern with section 1102.d(1) and 1102.h.’s requirement that those who perform installation of flowlines and crude oil transfer lines or inspection of crude oil transfer lines be “trained”. The Commission selected the term “trained” for several reasons. First, the Commission requires elsewhere in its Rules that persons be “trained” to complete certain tasks or activities. Second, and importantly, “trained” establishes an expectation that individuals have specific awareness, understanding, experience and degree of competency to perform the tasks. The American Society of Mechanical Engineer’s Pipeline Transportation Systems for Liquids and Slurries Standard B31.4, which is incorporated into the 1100 Series, describes training as an “organized program developed to impart the knowledge and skills necessary for qualification.”

Operators are also required to conduct repairs and maintenance on lines and crude oil transfer lines to minimize failures, leaks and corrosion of the pipelines and injury to persons and property. For example, operators are now required to lock-out or tag-out isolation valves on all flowlines not in active use. A line is not in active use when it is not holding pressure or flowing fluids. This requirement is integral to protecting public safety.

Operators are also now required to become Tier One members of the UNCC and to participate in Colorado’s One Call notification system. Rule 1102 requires operators

to include their UNCC member code on their Operator Registration, Form 1, Form 10 or Form 12 that are filed with the Commission. With the Commission registration, operators are granting the director permission to access information the UNCC has on file for that operator, including the location of underground oil and gas facilities. Operators are also required to submit and update information with UNCC to ensure that the UNCC database is accurate.

Rule 1102 also requires operators to maintain accurate records relating to maintenance, repairs, testing and other related data so operators have a living history of management for each flowline or crude oil transfer line. The Commission understands that in many instances historical maintenance records may not be available or complete; however, operators are expected to maintain existing records and comply with the record-keeping requirements from the effective date forward. In accordance with Rule 205, the director has the authority to inspect these records. Maintaining these records is imperative to ensuring that operators are in compliance with the 1100 Series. Boulder County's stakeholder comments encouraged and recognized the importance of this requirement.

### **3. *Rule 1103: Flowline and Crude Oil Transfer Line Valves.***

The Commission required operators to conduct annual maintenance operations on certain isolation valves installed on flowlines (but not manifold, peripheral, or process piping) and crude oil transfer lines. The isolation valves subject to Rule 1103.a. are valves closed to the atmosphere. Operators are now required to perform either a function test of the isolation valve or to maintain the valve in accordance with its manufacturer's specifications. Some operators expressed concern that although maintenance operations are conducted on isolation valves closed to the atmosphere, there exists the potential for some valves to release emissions when performing a function test. To mitigate any unintended release of emissions when performing a function test, operators are encouraged to conduct function tests outside of peak ozone season, which for the Denver Metro/North Front Range area is May 1 – September 30.

The Commission added Rule 1103 to require that operators install isolation and check valves on flowlines and crude oil transfer lines in specific circumstances, including certain water crossing areas consistent with input received from the Colorado Department of Public Health and Environment (CDPHE). Operators are also required to maintain and repair these valves. Staff initially proposed these requirements by amending existing Rule 605. Stakeholders raised concerns that application of the valve requirements to all equipment was overly broad and burdensome. Therefore, the Commission adopted the language in Rule 1103 to clarify the valve requirements and their application to flowlines and crude oil transfer lines. The valve requirements are intended to minimize fluid losses from pipelines by controlling and isolating fluid movement within pipeline segments.

The Commission is aware that existing and future crude oil transfer lines may feed into a PHMSA regulated gathering system. PHMSA regulated gathering systems are required to comply with valve requirements similar to those set forth in 1103.c.(1)-(5). Operators of Commission regulated crude oil transfer lines may determine it redundant to install a valve at a location identified in 1103.c. since there is already installed a PHMSA required valve near that location that substantially complies with the purpose and intent of 1103.c. If an operator makes such a determination, it must seek a variance from 1103.c. Without a variance from the Director or Commission, operators must comply with Rule 1103.c.

#### **4. *Rule 1104: Integrity Management.***

The Commission sought to establish a comprehensive Integrity Management program for all flowlines and crude oil transfer lines. Operators are now required to integrity test all new or repaired flowline and crude oil transfer line segments prior to putting them into service and periodically thereafter until the lines are abandoned. *See* Rule 1104. All new flowlines or crude oil transfer lines must be tested to their maximum anticipated operating pressure in accordance with the appropriate industry standard, e.g., API RP 1110, Recommended Practice for the Pressure Testing of Steel Pipelines for the Transportation of Gas, Petroleum Gas, Hazardous Liquids, Highly Volatile Liquids or Carbon Dioxide (6<sup>th</sup> Ed., February 1, 2013). Commission staff may require an operator to conduct an integrity test of any flowline or crude oil transfer line at any time upon staff request. The Commission adopted the “spot check” approach as a more efficient option than requiring operators to notify the staff prior to performing an integrity test.

Operators are required to test flowlines and crude oil transfer lines on a periodic basis throughout their operating lifetimes. Rules 1104.c. through f. establish the acceptable integrity management programs for each type of flowline or crude oil transfer line.

Rules 1104.h. through j. describes the minimum standards for each type of integrity test. These options include industry accepted technologies, some of which are used on other oil and gas production equipment to comply with other regulatory programs such as the CDPHE, Air Quality Control Commission, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.

The City and County of Broomfield and the City of Boulder advocated for redundant integrity testing of pipelines and specifically instrument-aided integrity surveys of certain flowlines. Staff investigated the potential for mandating audio, visual, olfactory (AVO) inspection plus instrument-aided integrity surveys for certain flowlines. Staff concluded that instrument-aided integrity survey is a nascent, quickly-evolving technology, and mandating its use at this time would be premature

without further study. Both CDPHE and the U.S. Environmental Protection Agency, are studying the efficacy of different types of instruments for use in these surveys.

The Commission directed the COGCC Director to empanel a stakeholder group consisting of representatives from industry, local governments, NGOs, and COGCC staff to examine current and developing instrument-based technologies and processes for preventing and detecting leaks and spills from flowlines. The stakeholder group will present to the Commission at least quarterly the status of the group's efforts. Within one-year staff will present a report discussing the stakeholder group's results, conclusions, and recommendations, if any, for changes to COGCC's policies or rules.

The Commission did include within the integrity management regime, the option for operators to conduct instrument-aided surveys. Section 1104.j.(2), provides operators the option of conducting a flowline survey using an instrument monitoring method (IMM) capable of detecting integrity failures, leaks, spills or releases. The Commission's IMM is similar to the CDPHE's Approved Instrument Monitoring Method for oil and gas facilities. *See Air Quality Control Commission (AQCC) Regulation No. 7 §XVII.A.2.* Section 1104.j. also defines an AVO detection survey. Dividing 1104.j. into two subparts to define AVO and IMM as separate methodologies that each serve a role in oil and gas operations to protect the environment and prevent waste, provides clarity and is important to distinguish between operators using traditional AVO and IMM.

The Commission required increased oversight of off-location flowlines and crude oil transfer lines because they move produced fluids between two or more different oil and gas locations, often across relatively long distances and across surface lands the operator does not control or manage. Off-location flowlines and crude oil transfer lines must demonstrate integrity through annual pressure testing, continuous pressure monitoring, smart pigging conducted every three-years, or an annual IMM detection survey.

For above ground on location flowlines, monthly AVO inspections are required.

The Commission recognizes that dump lines may not be designed or intended for internal pressure such as vacuum systems, or they may contain parts that cannot be isolated. Additionally, it may be impractical to conduct pressure testing on lines that cannot be temporarily closed to isolate the test section. Nonetheless, these lines are required to maintain integrity. For belowground dump lines, operators must conduct an annual static head test and a monthly AVO detection survey of the entire line. For above ground dump lines, operators must conduct a monthly AVO detection survey of the entire line. Inspections will include visual examination of joint appearance, mechanical checks of bolts and joint tightness, and such other

relevant examinations and methods to verify integrity.

If an operator chooses smart pigging as its integrity management program, the smart pig must be capable of measuring for specific defects that could affect pipe integrity. Additionally, the Commission recognizes that smart pigs may be useful for gathering location data for existing off-location flowlines and crude oil transfer lines where such data does not exist. In an effort to begin compiling data on the exact location of these existing on and off-location flowlines and crude oil transfer lines, the Commission expects that smart pigs used on these lines be equipped with GPS capabilities. However, the Commission recognizes that the use of a smart pig with GPS capabilities may not be feasible for all flowlines. For instance, smart pigs with GPS capabilities may be unable in some circumstances to navigate existing flowlines. The use of a smart pig with GPS capabilities is required only if it does not materially compromise the ability of the smart pig to conduct the integrity testing required in Sections 1104.e. and 1104.f.

The Commission also adopted gas leak reporting requirements to ensure the director is aware of integrity failures that result in a release of gas. Operator are not explicitly required to report such releases under the Commission's current spill and release reporting requirements. The Commission adopted a new definition for a Grade 1 Gas Leak, which includes leaks that present an immediate hazard or threat of hazard to any waters of the state, a residence or occupied structure, livestock, or public byway. The Commission incorporated this gas leak reporting requirement into the Integrity Management section of the rules. The Commission expects that operators will, as appropriate, report any Grade 1 Gas Leak to the CDPHE concurrent with its report to the Commission.

Stakeholders requested clarification about the effect the adopted rules will have on existing integrity management variances. Staff will review existing variances on a case-by-case basis and work with operators to modify or terminate as appropriate.

## **5. *Rule 1105.***

The Commission moved the abandonment provisions of existing Rule 1103 to a new Rule 1105. The Commission also revised the abandonment provisions to clarify and specify that all flowlines and crude oil transfer lines are considered active, and thus subject to Rules 1101 through 1104, unless the line has been fully abandoned pursuant to new Rule 1105. Thus, operators are required to conduct integrity tests on a flowline or crude oil transfer line that is not in active use. Rule 1105 specifies the steps that an operator must perform to fully abandon a line, including lockout and tagout of all risers associated with the line when the line is taken out of service, but not abandoned.

Additionally, the Commission required operators to notify the director upon abandonment of a flowline or crude oil transfer line by filing a Form 44, Notice of

Flowline Abandonment. Commission staff will provide the Form 44 to the local government designee and the UNCC. Some stakeholders expressed reservations about the director providing abandonment information to UNCC, concerned it could create confusion as to whether all or a portion of a line has been abandoned. However, UNCC requested the Commission provide notice of an abandonment. Providing the Form 44 abandonment notice to UNCC and the appropriate LGD will allowing those entities to coordinate directly with the operator regarding the abandoned lines.

### **Other Rule Additions and Amendments**

The Commission made the following additions and amendments to the below-listed rules. These changes were primarily designed to clarify specific details of these rules or to conform them to the amendments to the 1100 Series Rules.

#### ***100 Series Rules: Definitions***

The 100 Series definitions were amended to make conforming changes to defined terms.

#### ***300 Series Rules: Revised Registration and Fluid Management Requirements***

The Commission added Rule 313B to clarify registration requirements for gas gathering systems, compressor stations, processing, or storage facilities. In furtherance of public health, safety and welfare the Commission believed it was imperative to have the registration information for these gas facilities.

As amended, Rule 328 incorporates an alternate method of tank gauging that allows operators to measure the volume of oil produced before the oil is removed from a storage tank. This requirement is more protective of public health, safety, and the environment because it does not require opening a hatch, and thus prevents fugitive gas emissions. In addition, the Commission has historically approved variances allowing operators to use this measurement methodology. This amendment allows operators to use an equally effective gauging method that is safer without seeking a variance.

The Commission made amending or conforming changes to Rules 303, 312, 313 and 317B.

#### ***600 Series: Required Accident Reporting.***

The Commission amended the existing accident reporting requirements in Rule 602 to ensure operators timely and thoroughly notify the Commission of safety events, including any “reportable injury”, as that term is defined by the U.S. Department of



Labor, Occupational Safety and Health Administration, suffered by an oil and gas worker. Operators may initially notify the director of a safety event by telephone, text message, or email. The amendments also clarify what information the Commission may seek from an operator about the safety event. Stakeholders indicated concern and interest in improving the existing regulation. Specifically, several stakeholders sought clarification regarding the requirement for operators to report on accidents to a third-party entity. Staff revised the rule to specify operators may be required to present to an “oil and gas safety review organization” approved by the director.

Rule 605.d. was revised to make a conforming change.

***700 Series: Revised Bonding for E&P Waste from Water or Gas Gathering.***

Rule 711 was amended to make conforming changes to defined terms. Additionally, an operator of a produced water transfer system must provide a financial assurance. The Commission determined that it was necessary to require a bond for produced water transfer systems due to the potential health and safety hazards associated with a failure of a produced water transfer system and release of E&P Waste.

***900 Series Rules.***

Rule 907 was amended to make conforming changes to defined terms.

**Effective Date.**

The Commission adopted the proposed amendments in accordance with the Governor’s announced initiatives, which added to and amended definitions in the Rule 100 Series, revised the 1100 Series, and amended 303, 312, 313, 317B, 328, 602, 605, 711, and 907, at its hearing on February 13, 2018, in Cause No. 1R, Docket No. 171200767. These amendments will become effective, per Section 24-4-103(5), C.R.S., on May 1, 2018.