



COGCC OPERATOR GUIDANCE

RULE 326: MECHANICAL INTEGRITY GUIDANCE

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Background

The mechanical integrity of wells shall be verified as required by Rule 326. Mechanical integrity and associated mechanical integrity tests (MITs) are critical aspects of ensuring wellbore integrity. The following is guidance related to how COGCC staff will interpret and enforce mechanical integrity requirements and when, based upon the type well, operators must perform MITs.

Rule 326 defines a mechanical integrity test as: “a test to determine if there is a significant leak in the well’s casing, tubing, or mechanical isolation device, or if there is significant fluid movement into an underground source of drinking water through vertical channels adjacent to the wellbore.”

For guidance on how to perform a mechanical integrity test, refer to the COGCC [Practices and Procedures - Mechanical Integrity Tests](#), which is available on the COGCC website.

Mechanical Integrity Rules

326. Mechanical Integrity Testing

- a. Injection Wells.
- b. Shut-in Wells.
- c. Temporarily Abandoned Wells.
- d. Waiting-on-completion and Suspended Operations Wells.
- e. Notice.
- f. All wells shall maintain mechanical integrity.
- g. Mechanical integrity test pressure loss or gain.

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Non-Injection Well Discussion:

Overview:

The following are the rules related to mechanical integrity for non-injection wells:

- Rule 326.f. requires all wells, including non-injection wells, to maintain mechanical integrity. COGCC staff interprets “maintain” to mean that a well must have mechanical integrity at all times.
- Rule 326.f.(1) lists the requirements an operator must perform if it is determined that a non-injection well lacks mechanical integrity.
- Rules 326.b, 326.c, and 326.d outline the mechanical integrity testing requirements for all non-injection wells (see below table for more details).

Scenarios:

If it is determined that a non-injection well lacks mechanical integrity through an MIT or other means, then the well must be repaired or plugged and abandoned within the timeframes discussed below.

The following two scenarios are examples related to allowable timeframes to fix mechanical integrity issues identified in non-injection wells:

1. If the operator discovered the integrity issue via an MIT or other means within the required testing timeframes as outlined in Rules 326.b-d (and highlighted in the below table), the operator will have six months from the date of discovery to make repairs or plug and abandon the well.
 - a. Example:
 - i. MIT is due April 1, 2015.
 - ii. MIT is performed March 1, 2015 and a mechanical integrity issue is identified.
 - iii. Operator will have until September 1, 2015 (6 months from discovery date of March 1, 2015) to fix the mechanical integrity issue.
 - iv. If the work is performed within the above timeframes, no Warning Letter or NOAV will be issued.
2. If the operator discovered the integrity issue via an MIT or other means beyond the required timeframes as outlined in Rules 326.b-d (and highlighted in the below table), the operator will ***not*** have six months from the date of discovery to make repairs or plug and abandon the well. Rather, the operator will receive either a Warning Letter or NOAV related to Rules 326.b-d, which will contain a corrective action due date. That due date will likely be a shorter duration than six months

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and likely require that the well be repaired and successfully MITed, if the operator elects not to P&A the well.

- a. Example:
 - i. MIT is due April 1, 2015.
 - ii. MIT is performed May 1, 2015 and a mechanical integrity issue is identified.
 - iii. Operator will receive a Warning Letter or NOAV related to Rules 326.b-d with a corrective action due date of less than six months because the MIT was not timely performed.

Violation Classification:

Rules 326.b, 326.c, 326.d, 326.f, and 326.f.(1), which relate to mechanical integrity for non-injection wells, have been defined as Class 2 discretionary violations. This means that under the conditions stated in Rule 522.c., the Director is authorized to issue a Warning Letter, in lieu of an NOAV. For further information about enforcement procedures, refer to COGCC's Enforcement Guidance and Penalty Policy, which is available on the COGCC website.

Following are common areas where violations related to mechanical integrity may occur for non-injection wells:

1. The operator does not perform MITs within the timeframes required in Rules 326.b-d (and highlighted in the below table). A Warning Letter or enforcement action with corrective action deadlines may result as outlined in Rule 522.c and 522.d.
2. A mechanical integrity issue is identified and the operator repairs the well, but not within the required time periods. A Warning Letter is possible as outlined in Rule 522.c. or an enforcement action may be initiated.
3. A mechanical integrity issue is identified and the operator does not correct the issue. An enforcement action may result as this scenario likely would not satisfy the requirements outlined in Rules 522.c for issuance of a Warning Letter.

UIC Well Discussion:

Overview:

The following are the rules related to mechanical integrity for injection (UIC) wells:

- Rule 326.f. requires all wells, including UIC wells, to maintain mechanical integrity. COGCC staff interprets "maintain" to mean that a well must have mechanical integrity at all times.
- Rule 326.f.(2) lists the requirements an operator must perform if it is determined that a UIC well lacks mechanical integrity.

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- Rule 326.a outlines the mechanical integrity testing requirements for all UIC wells (see below table for more details).

Scenarios:

If it is determined that a UIC well lacks mechanical integrity through an MIT or other means, the well shall be shut-in immediately and then either repaired or plugged and abandoned in a timeframe set forth in a plan approved by the COGCC.

As an example, assume a UIC well fails an MIT. The well shall be shut-in and disconnected immediately. The operator must obtain prior COGCC approval for any repair and successfully complete the repair as soon as possible. Injection may not start again until the well passes an MIT.

Violation Classification:

Rule 326.a has been defined as a Class 2 mandatory violation. This means that an operator who has not performed a timely MIT for a UIC well, as required, will most likely receive an NOAV, which initiates an enforcement action. Pursuant to the Commission's enforcement and penalty guidance, a Warning Letter will rarely be issued in these cases.

Rules 326.f, and 326.f.(2), which relate to mechanical integrity for UIC wells, have been defined as Class 2 discretionary violations. This means that under the conditions stated in Rule 522.c., the Director is authorized to issue a Warning Letter, in lieu of an NOAV.

Following are common areas where violations related to mechanical integrity may occur for UIC wells:

1. The operator does not perform MITs within the timeframes required in Rule 326.a (and highlighted in the below table). This is a mandatory NOAV. A Warning Letter will not be issued.
2. A mechanical integrity issue is identified and the operator, timely shuts in the wells and then timely repairs or plugs the well. A Warning Letter is possible as outlined in Rule 522.c or an enforcement action may be initiated.
3. A mechanical integrity issue is identified and the operator does not seek COGCC approval for a plan or otherwise act to correct the integrity issue. An enforcement action may result as the scenario likely would not fulfill the requirements outlined in Rule 522.c.

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Guidance to Further Clarify when MITs are Required

The following are the types of wells that must have MITs performed along with associated timeframes:

Well Type	Definition	Timeframe
Shut-In	Shall mean a well which is capable of production or injection by opening valves, activating existing equipment or supplying a power source. (see 100 Series).	Within 2 years of shut-in date and every 5 years after that.
Temporarily Abandoned (TA)	<p>Shall mean a well that has all downhole completed intervals isolated with a plug set above the highest perforation such that the well cannot produce without removing a plug or a well which is incapable of production or injection without the addition of one or more pieces of wellhead or other equipment, including valves, tubing, rods, pumps, heater-treaters, separators, dehydrators, compressors, piping or tanks. (see 100 Series). For further discussion on TA wells refer to Rule 319.b.</p> <p>These do not apply to wells that have been temporarily disconnected so nearby new horizontal wells can be drilled or completed. These situations should be discussed with COGCC Engineering staff.</p>	Within 30 days of TA date and every 5 years after that.
Waiting-on-Completion	<p>Shall mean a well which has been drilled, cased, and cemented but the objective hydrocarbon formation has not yet been completed or stimulated using an open-hole, a liner, or a perforated casing completion. (see 100 Series).</p> <p>Enforcement related to this well type will begin 2 years after Rule 326.d became effective, or beginning January 30, 2017.</p>	Within 2 years of setting production casing.
Suspended Operations	Shall mean a well in which drilling operations have been suspended prior to reaching total depth and at least one casing string (the surface casing) has been set and cemented in the wellbore. This definition does not include wells in which only conductor pipe has been set, and the surface hole has not been spud. (see 100 Series).	Within 2 years of setting any casing string.

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	Enforcement related to this well type will begin 2 years after Rule 326.d became effective, or beginning January 30, 2017.	
Dedicated Injection Well	Shall mean any Class II wells used for the exclusive purpose of injecting fluids or gas from the surface for enhanced oil recovery or the disposal of E&P wastes. A gas storage well is not a dedicated injection well. (see 100 Series).	Prior to injection, after repairs, periodically as defined in Rule 326.a

Guidance Disclaimer

This is a guidance document, not a formal rule. The purpose of this guidance document is to inform all interested stakeholders of the Commission's interpretation of, and expectations concerning, the formal Commission Rules discussed herein. Interpretative rules or general statements of policy, such as this guidance document, are not meant to be binding as rules under the Administrative Procedures Act. § 24-4-103(1), C.R.S.

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