

20 AAC 25.265 is repealed and readopted to read:

**20 AAC 25.265. Well safety valve systems.** (a) A completed well must be equipped with a functional safety valve system unless the well is

- (1) a water source well;
- (2) a disposal injection well;
- (3) an observation well;
- (4) shut-in; or
- (5) suspended.

(b) A safety valve system must have a surface safety valve with an actuator and a low-pressure mechanical or electrical detection device with the capability to shut-in a well when the well's flow line pressure drops below the required system actuation pressure.

(c) A safety valve system must meet the following requirements:

- (1) the surface safety valve must be located within the vertical run of a well's tree;
- (2) the low-pressure mechanical or electrical detection device must be installed on the well's flow line;
- (3) the safety valve system control unit must be placed in a location that allows unobstructed control unit access for operation, maintenance, repair, and inspection;
- (4) for a producing well, a check valve must be installed in the well's flow line upstream of the production manifold, except for a well that cycles between gas storage injection and production;

(5) in a well's safety valve system a fusible plug or a functionally equivalent device must be installed near enough to the wellhead so that the well will be immediately shut-in if there is a fire;

(6) a structure containing multiple wells in a common area must have a gas detection system and a fire detection system that will immediately shut-in the wells located within the structure;

(7) safety valve system equipment must be maintained in good operating condition at all times and must be protected to ensure reliable operation under the range of weather conditions expected at the well site; and

(8) components of a safety valve system installed before December 3, 2010 which do not meet the requirements of (1) - (7) of this subsection, require commission approval no later than one year after December 3, 2010 to remain in operation.

(d) In addition to meeting the other requirements of this section, the following wells must be equipped with a fail-safe automatic surface controlled subsurface safety valve capable of preventing an uncontrolled flow of fluid from the well's tubing:

(1) a well that is capable of unassisted flow of hydrocarbons to surface and that has an offshore surface location;

(2) a well that is capable of unassisted flow of hydrocarbons to surface and that has an onshore surface location that is 660 feet or less of

(A) a permanent dwelling intended for human occupancy, including a billeting camp or private residence;

(B) an occupied commercial building, excluding a structure located within an existing oil or gas field;

(C) a road accessible to the public;

(D) an operating railway;

(E) a government maintained airport runway;

(F) a coast line measured at mean high water;

(G) a public recreational facility; or

(H) navigable waters as defined by the United States Army Corps of Engineers in 33 C.F.R. Part 329.4 with boundaries defined in 33 C.F.R. 329.11; or

(3) a well that the commission determines, after notice and an opportunity for hearing in accordance with 20 AAC 25.540, must be equipped with a subsurface safety valve;

(4) an onshore well in a location described under (2) of this subsection and equipped with an electric submersible pump or capillary string run within the tubing is not required to be equipped with a subsurface safety valve;

(5) gas-only injection wells must be equipped with either a subsurface safety valve as stated in this subsection, or an injection valve capable of preventing back flow; the commission will address wells cycling between gas storage injection and production on a case-by-case basis.

(e) If a well is being produced by artificial lift, the capability must exist to shut down artificial lift to the well.

(f) A well that was completed before December 3, 2010 that is subject to the requirements of (d) of this section and that is not equipped with the functional hardware that would make a subsurface safety valve installation possible sooner, must comply with the provisions of (d) of this section no later than the date that the well undergoes a tubing workover.

(g) A subsurface safety valve required under this section must be installed in the tubing string and

(1) located a minimum of 100 feet below the following:

(A) original ground level for onshore wells;

(B) mudline datum for offshore wells;

(2) notwithstanding the provisions of (1) of this subsection, if permafrost is present, the subsurface safety valve must be located below the permafrost.

(h) Except for a well injecting water, safety valve system testing is required. Safety valve system testing may consist of a function-test, a performance-test, or both. A performance-test includes a function pressure-test of the system's valves and a function-test of the mechanical or electrical actuating device. A safety valve system component fails a performance-test when a test criterion in (9) – (12) of this subsection is not met on the first attempt. The safety valve system must be tested as follows:

(1) performance-testing of the safety valve system must be accomplished using a calibrated pressure gauge of suitable range and accuracy;

(2) a performance-test is required following installation, repair, or replacement of a low-pressure mechanical or electrical detection device, surface safety valve, or subsurface safety valve;

(3) a function-test only is required following the installation, repair, or replacement of safety valve system components other than those listed in (2) of this subsection, before or at the time of placing a well in service;

(4) a new well requiring a safety valve system may not be operated unless it passes a performance-test not later than five days after placing the well in service; the timing of

all other safety valve system performance-testing must be consistent with the requirements of (i) of this section;

(5) a performance-test must be conducted semi-annually, not to exceed 210 days between tests, unless the commission prescribes a different testing interval based on test performance results;

(6) a well isolated from its flow line or other production offtake mechanism need not be tested at the time of the required performance-test stated in this subsection, but the safety valve system must be performance-tested not later than five days after the well's return to stabilized production or injection;

(7) performance-test results must be verified by an operator's designated representative and submitted electronically to the commission not later than the 15th calendar day of the month following the testing;

(8) at least 24 hours notice of safety valve system performance-testing must be provided to the commission so that a commission representative can witness the test; however, at least 48 hours notice must be provided if the test location is remote from the nearest commission office;

(9) the system actuation pressure of the low-pressure mechanical or electrical detection device installed on a production well must be at least 50 percent of the separator inlet pressure or at least 25 percent of the flowing tubing pressure, whichever is greater;

(10) when a safety valve system is required, the system actuation pressure of the low-pressure mechanical or electrical detection device installed on injection wells must be greater than 50 percent of the injection tubing pressure;

(11) not later than two minutes after the actuation of a mechanical or electrical detection device, a required surface safety valve must close; after valve closure with a measurable pressure differential across the valve, there must be no detectable leakage as evidenced by a stabilized, flat-line pressure response;

(12) not later than four minutes after the actuation of a mechanical or electrical detection device, a required subsurface safety valve must close; after valve closure with a measurable pressure differential across the valve, there must be no detectable leakage as evidenced by a stabilized, flat-line pressure response;

(13) preventive maintenance records for the consecutive six months immediately before the testing must be made available at the request of a commission representative; the records must indicate the date and type of safety valve system maintenance completed.

(i) If a component of a safety valve system fails a performance-test, the component must be repaired or replaced, or the well shut-in as follows:

(1) if the mechanical or electrical actuating device fails to actuate or actuates below the required trip pressure, the actuating device must immediately be repaired or replaced and performance-tested, or the well must immediately be shut-in;

(2) for a well equipped with only a surface safety valve,

(A) if the surface safety valve fails to close, it must immediately be repaired or replaced and performance-tested, or the well must immediately be shut-in; or

(B) if the surface safety valve leaks, the valve must, not later than 24 hours after the leak is found, be both repaired or replaced and performance tested, or the well must be shut-in;

(3) for a well equipped with both a surface safety valve and a commission-required subsurface safety valve,

(A) if either the surface safety valve or subsurface safety valve fails to close, the failing valve must, not later than 48 hours after the failure is found be both repaired or replaced and performance-tested, or the well must be shut-in;

(B) if either the surface safety valve or commission-required subsurface safety valve leaks, the leaking valve must, not later than 14 days after the leak is found, be both repaired or replaced and performance-tested, or the well must be shut-in; and

(C) if both the surface safety valve and subsurface safety valve fail a performance-test, at least one valve must immediately be both repaired or replaced and performance-tested in place, or the well must immediately be shut-in; the remaining valve must, not later than 14 days after the failure is found, be repaired or replaced and performance-tested, or the well must be shut-in;

(4) if the positive sealing device used to test a safety valve system leaks or otherwise precludes a successful safety valve system test, testing may continue with a substitute valve upon commission approval; the positive sealing device must be repaired or replaced before the next required safety valve system test.

(j) When required by a tubing workover, well intervention, or by routine well pad or platform operations,

(1) the subsurface safety valve may be temporarily blocked or removed; however, the subsurface safety valve must be made operable not later than 14 days after the date that the well is returned to service, and be tested not later than five days after installation in accordance with (h) of this section; and

(2) the surface safety valve and the mechanical or electrical detection device may be temporarily removed or defeated; however, unless otherwise authorized by the commission, the well pad or platform must be continuously manned, or the well must be shut-in, until the surface safety valve and mechanical or electrical detection device are made operable; well pads, platforms, islands, or similar groups of wells are continuously manned if sufficient responsible personnel are physically on-site and manually able to provide a level of protection equivalent to the removed or defeated safety valve system equipment.

(k) An operator may demonstrate by a no-flow test that a well is incapable of the unassisted flow of hydrocarbons to the surface subject to the following:

(1) a no-flow test must be performed according to commission-approved procedures, and to demonstrate no-flow, there must be a commission-witnessed three-hour period of no-flow;

(2) at least 24 hours notice must be provided to the commission so that a commission representative can witness the test; however, at least 48 hours notice must be provided if the test location is remote from the nearest commission office;

(3) upon notice to the commission of an upcoming no-flow test, a well may be produced without a subsurface safety valve for not more than five days in order to reach a stabilized condition before the test;

(4) well work activities that have the potential to impact a well's flow capability invalidate the well's no-flow status.

(l) For purposes of (d) of this section, a well is incapable of the unassisted flow of hydrocarbons to the surface when

(1) a witnessed no-flow test demonstrates that either

(A) the measured liquid production is not greater than 6.3 gallons per hour, and the measured gas production is not greater than 900 standard cubic feet per hour; or

(B) well pressure is discharged not later than five minutes after a three-hour charted pressure build-up period; and

(2) the operator receives written confirmation, including confirmation by electronic mail that is retained as a record by the operator, from the commission that the results of the witnessed no-flow test were accepted.

(m) If a required component of a well's safety valve system is inoperable, removed, or blocked, the well must be tagged. Tagging is not required during well work activities and continuously manned operational activities that affect a safety valve system. The tag must identify the following:

- (1) the inoperable, removed, or blocked component;
- (2) the date and reason, if known, that the component was inoperable, removed, or blocked;
- (3) the name of the individual completing the tag.

(n) The operator of each field shall designate and report to the commission a position as the single-point-of-contact. The single-point-of-contact is responsible for the following:

(1) ensuring that a safety valve system test schedule is coordinated with the commission;

(2) ensuring that actions consistent with these regulations are taken in the event of a safety valve system failure and reported to the commission;

(3) ensuring that the commission is notified when a safety valve system has been repaired and is ready for testing;

(4) maintaining records of safety valve system performance tests, failures, repairs, and retests for a period of at least five years;

(5) ensuring that the commission is notified if well conditions cause a change in safety valve system requirements, such as when a no-flow well is returned to flowing status.

(o) Unless notice and a hearing are required under (d)(3) of this section, upon written request from the operator, the commission may approve

(1) a variance from a requirement of this section if the variance provides at least an equally effective means of complying with the requirement; or

(2) a waiver of a requirement of this section if the waiver does not promote waste, is based on sound engineering and geoscience principles, will not jeopardize the ultimate recovery of hydrocarbons, does not jeopardize correlative rights, and does not result in an increased risk to health, safety, or the environment, including freshwater.

(p) In this section, unless the context otherwise requires, "well's flowline" means the section of line between a well tree and the first piping manifold. (Eff. 4/13/80, Register 74; am 4/2/86, Register 97; am 11/7/99, Register 152; am 12/3/2010, Register 196)

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