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Title 40 —Protection of Environment

Chapter I —Environmental Protection Agency

Subchapter C —Air Programs

Part 60 —Standards of Performance for New Stationary Sources

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Subpart Kc Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023

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Subpart Kc—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023

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§ 60.110c Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 20,000 gallons (gal) (75.7 cubic meters (m³)) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after October 4, 2023.

(b) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants;

(2) Pressure vessels designed to operate in excess of 29.7 pounds per square inch absolute (psia) (204.9 kilopascals (kPa) absolute) and without emissions to the atmosphere;

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships;

- (4) Vessels with a design capacity less than or equal to 420,000 gal (1,589.874 m³) used for petroleum or condensate stored, processed, or treated prior to custody transfer;
 - (5) Vessels located at bulk gasoline plants as defined in 40 CFR 63.11100;
 - (6) Vessels located at gasoline service stations;
 - (7) Vessels used to store beverage alcohol; or
 - (8) Vessels that only store VOL with a maximum true vapor pressure less than 0.25 psia (1.7 kPa absolute).
- (c) Storage vessels that are affected facilities according to paragraph (a) of this section for which construction or reconstruction commenced after October 4, 2023 are subject to the standards in § 60.112c and the corresponding requirements in §§ 60.113c through 60.116c as new sources any time they meet the specifications in either paragraph (c)(1) or (2) of this section, regardless of whether they initially contained VOL with a maximum true vapor pressure below the applicable threshold in paragraph (c)(1) or (2) of this section.
- (1) Storage vessels with a capacity greater than or equal to 40,000 gal (151 m³) containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 0.5 psia (3.4 kPa).
 - (2) Storage vessels with a capacity greater than or equal to 20,000 gal (75.7 m³) but less than 40,000 gal (151 m³) containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 1.5 psia (10.3 kPa).
- (d) Storage vessels that are affected facilities according to paragraph (a) of this section for which construction or reconstruction commenced on or before October 4, 2023, (“existing storage vessels”) and are modified after October 4, 2023, are subject to the standards in § 60.112c and the corresponding requirements in §§ 60.113c through 60.116c as modified sources any time they meet the specifications in either paragraph (d)(1) or (2) of this section.
- (1) For an existing storage vessel with a capacity greater than or equal to 40,000 gal (151 m³), containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 0.5 psia (3.4 kPa).
 - (2) For an existing storage vessel with a capacity greater than or equal to 20,000 gal (75.7 m³) but less than 40,000 gal (151 m³), containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 1.5 psia (10.3 kPa).
- (e) For the purposes of this subpart,
- (1) The phrase “change in the method of operation of, an existing facility which increases the amount of any air pollutant” in the definition of modification in § 60.2 or “operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies” in § 60.14(a) means a change in operation occurs if the storage vessel is used to store a VOL that has a greater maximum true vapor pressure than all VOL historically stored or permitted; and
 - (2) The exemption in § 60.14(e)(4) regarding alternative fuel or raw material does not apply to storage vessels.

- (f) Storage vessels that are affected facilities according to paragraph (a) of this section and do not meet the criteria in either paragraph (c)(1), (c)(2), (d)(1), or (d)(2) of this section are subject to the requirements in § 60.113c(d), if applicable, and § 60.115c(b).
- (g) All standards including emission limitations shall apply at all times, including periods of startup, shutdown and malfunction. As provided in § 60.11(f), this paragraph (g) supersedes the exemptions for periods of startup, shutdown, and malfunction in subpart A of this part.
- (h) Owners or operators may choose to comply with the provisions of this subpart to demonstrate compliance with subparts K, Ka, and Kb of this part. Compliance with the provisions of this subpart, including all control requirements, recordkeeping, and reporting requirements, will constitute compliance with the applicable storage vessel provisions in subparts K, Ka, and Kb.
- (i) Owners or operators may choose to comply with this subpart to demonstrate compliance with 40 CFR part 63, subpart WW for storage vessels equipped with an internal or external floating roof that is subject to this subpart and 40 CFR part 63, subpart WW. Compliance with this subpart, including all floating roof requirements, recordkeeping, and reporting requirements, will constitute compliance with the applicable storage vessel provisions in 40 CFR part 63, subpart WW.

§ 60.111c Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Access hatch means an opening in the roof with a vertical well and a cover attached to it. Access hatch provides passage for workers and materials through the roof for construction or maintenance.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device. Closed vent system does not include the vapor collection system that is part of any tank truck or railcar.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Degassing means the process of removing VOL vapors from a storage vessel during, or in preparation of, cleaning or when taking the storage vessel out of service for inspection, repair, or other reason.

Enclosed combustion device means a thermal combustion device used to mix and ignite fuel, air pollutants, and air to provide a flame to heat and oxidize air pollutants and that emits the oxidized pollutants through a conveyance suitable to conduct a performance test. An *enclosed combustion device* may have recovery heat to preheat combustion air, but its primary purpose is for emission control and not to produce useful heat. *Enclosed combustion devices* include, but are not limited to, thermal oxidizers and incinerators. For the purpose of this subpart, process heaters and boilers are not *enclosed combustion devices*.

External floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a storage vessel without a fixed roof.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Flare means a thermal combustion device using an open or shrouded flame (without full enclosure) such that the pollutants are not emitted through a conveyance suitable to conduct a performance test.

Fuel gas system means the offsite and onsite piping and control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices, or in- process combustion equipment such as furnaces and gas turbines, either singly or in combination.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage vessels.

Gauge float means a device that is used to indicate the level of liquid within the storage vessel. The float rests on the liquid surface and is housed inside a well that is closed by a removable cover.

Gauge hatch/sample port/sample well means an opening in the roof that provides access for gauging or sampling. A gauge hatch is usually equipped with a closing cover or a funnel and slit-fabric seal to cover the opening.

Internal floating roof means a floating roof located in a storage vessel with a fixed roof. For the purposes of this subpart, an external floating roof located in a storage vessel to which a fixed roof has been added is considered to be an internal floating roof.

Liquid-mounted primary seal means a liquid or foam-filled seal mounted in continuous contact with the liquid between the wall of the storage vessel and the floating roof around the entire circumference of the storage vessel.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOLs stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOLs stored at the ambient temperature, as determined using the procedures specified in § 60.113c(d).

Mechanical shoe primary seal means a metal sheet (the shoe) held vertically against the wall of the storage vessel by springs or weighted levels and is connected by braces to the floating roof. A flexible coated fabric (the envelope) spans the annular space between the metal sheet and the floating roof.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device or resulting from vacuum breaking device failing to close prior to the system reaching atmospheric pressure. This release can be one release or a series of releases over a short time period.

Pressure relief device means a valve, rupture disk, or similar device used only to release an unplanned, nonroutine discharge of gas from process equipment in order to avoid safety hazards or equipment damage. Devices with low opening pressures must be monitored as bypass lines. A pressure relief device discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause. Such devices include conventional, spring-actuated relief valves, balanced bellows relief valves, pilot-operated relief valves, rupture disks, and breaking, buckling, or shearing pin devices. Devices that are actuated only by a vacuum are not pressure relief devices. If a device has both a

pressure relief function and a vacuum breaking function, such as a conservation vent, the portion of the conservation vent that acts to relieve pressure is considered a pressure relief device and the portion of the conservation vent that acts to relieve vacuum is a vacuum breaking device and not a pressure relief device.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases.

Rim-mounted secondary seal means a secondary seal mounted on the rim of the floating roof of a storage vessel and forms continuous seal from the rim of the floating roof to the wall of the storage vessel.

Rim seal system means a primary seal or a primary and secondary seal, which is mounted above the primary seal, and is attached to the deck perimeter and contacts the storage vessel wall.

Rim vent means a device consisting of a weighted pallet that rests on a valve seat. Rim vents are used to release any excess pressure or vacuum present in the vapor pocket between the seal and the rim area of a floating roof storage vessel.

Routed to a process or route to a process means the emissions are conveyed by hardpiping or a closed vent system to any enclosed portion of a process unit where the emissions are predominately recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not volatile organic liquids; and/or incorporated into a product; and/or recovered.

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;
- (2) Subsurface caverns or porous rock reservoirs; or
- (3) Process tanks.

Vacuum breaker/automatic bleeder vent means a device used to equalize the pressure of the vapor space across the deck of a floating roof as the floating roof is either being landed on or floated off its roof supports. A vacuum breaker/automatic bleeder vent consists of a well with a cover. The cover is designed to open as the floating roof is landed. Opening of the cover may be accomplished by mechanisms such as leg actuation or pressure actuation.

Vacuum breaking device means a device on a fixed roof of a storage vessel used to prevent mechanical failure of the storage vessel due to vacuum created as liquids are withdrawn from the storage vessel. If a device has both a pressure relief function and a vacuum breaking function, such as a conservation vent, the portion of the conservation vent that acts to relieve vacuum is considered a vacuum breaking device and the portion of the conservation vent that acts to relieve excess pressure is a pressure relief device and not a vacuum breaking device.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining, or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

§ 60.112c Standard for volatile organic compounds (VOC).

- (a) **General storage vessel control requirements.** You must equip and operate each storage vessel affected facility meeting the thresholds in § 60.110c(c)(1), (c)(2), (d)(1), or (d)(2) as specified in paragraphs (a)(1) through (4) of this section, as applicable.
- (1) For each storage vessel affected facility containing a VOL that, as stored, has a maximum true vapor pressure less than 11.1 psia (76.6 kPa), you may elect to install and operate either an internal floating roof meeting the requirements in paragraph (b) of this section, an external floating roof meeting the requirements in paragraph (c) of this section, or a closed vent system routed to a control device, fuel gas system, or process as specified in paragraph (d) of this section.
 - (2) For each storage vessel affected facility containing a VOL that, as stored, has a maximum true vapor pressure of 11.1 psia (76.6 kPa) or more, you must install and operate a closed vent system routed to a control device, fuel gas system, or process as specified in paragraph (d) of this section.
 - (3) For each storage vessel affected facility complying with the closed vent system routed to a control device, fuel gas system, or process provisions specified in paragraph (d) of this section regardless of size and for each storage vessel with a design capacity greater than or equal to 1,000,000 gal (3,790 m³) containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 1.5 psia (10.3 kPa), you must also comply with the requirements in paragraph (e) of this section.
 - (4) You must meet the applicable testing, monitoring, and inspection requirements specified in § 60.113c, recordkeeping requirements specified in § 60.115c, and reporting requirements specified in § 60.116c.
- (b) **Requirements for an internal floating roof.** You must equip and operate each internal floating roof as specified in paragraphs (b)(1) through (16) of this section, as applicable.
- (1) The internal floating roof must rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof must be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the roof supports, the process of filling, emptying, or refilling must be continuous and must be accomplished as rapidly as possible.
 - (2) Except as provided in paragraph (b)(14) of this section, each internal floating roof must be equipped with the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
 - (i) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

- (ii) The primary seal must be either a mechanical shoe seal or a liquid-mounted seal. If a mechanical shoe seal is used, it must be installed so that one end of the shoe extends into the stored VOL and the other end extends a minimum vertical distance of 6 inches (15 centimeters) above the stored organic liquid surface.
 - (iii) The secondary seal must be rim-mounted.
- (3) Each opening in a noncontact internal floating roof except for vacuum breaker/automatic bleeder vents and the rim vents is to provide a projection below the liquid surface.
- (4) Vacuum breaker/automatic bleeder vents must be equipped with a gasket and are to be closed at all times, with no visible gaps, when the roof is floating. Vacuum breaker/automatic bleeder vents must be set to open only when the roof is being floated off or is being landed on the roof supports.
- (5) Rim vents must be equipped with a gasket and must be closed at all times with no visible gaps when the roof is floating. Rim vents must be set to open only when the internal floating roof is not floating or when the pressure beneath the rim seal system exceeds the manufacturer's recommended setting.
- (6) Each penetration of the internal floating roof for the purpose of sampling must be a gauge hatch/sample well. Except as specified in paragraph (b)(14) of this section, the gauge hatch/sample well must have a gasketed cover, which must be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.
- (7) Each access hatch and gauge float well must be equipped with a cover that is gasketed and that is bolted or otherwise mechanically secured. The cover must be closed and must be bolted or otherwise mechanically secured at all times, with no visible gaps, except when the hatch or well must be opened for access.
- (8) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof must have a flexible fabric sleeve seal or a gasketed sliding cover.
- (9) Each penetration of the internal floating roof that allows for passage of an unslotted leg ladder or unslotted ladder/guidepole combination must have a gasketed sliding cover. The cover must be closed at all times, with no visible gaps, except when the well must be opened for access.
- (10) Each slotted guidepole must be equipped with one of the controls specified in paragraphs (b)(10)(i) through (v) of this section. The covers must be designed to be closed at all times, with no visible gaps, except when the cover must be opened for access.
 - (i) Gasketed sliding well cover, with pole sleeve. The sleeve must extend into the stored liquid.
 - (ii) Gasketed sliding well cover, with pole sleeve and pole wiper. The sleeve must extend into the stored liquid.
 - (iii) Gasketed sliding well cover, with pole float and pole wiper. The wiper or seal of the pole float must be at or above the height of the pole wiper.
 - (iv) Gasketed sliding well cover, with pole float, pole sleeve, and pole wiper. The sleeve must extend into the stored liquid. The wiper or seal of the pole float must be at or above the height of the pole wiper.

- (v) A flexible device that completely encloses the slotted guidepole and eliminates the hydrocarbon vapor emissions pathway from inside the storage vessel through the guidepole slots to the outside air; a gasketed guidepole cover at the top of the guidepole; and a gasketed sliding well cover positioned at the top of the guidepole well that seals any openings between the well cover and the guidepole (e.g., pole wiper), any openings between the well cover and any other objects that pass through the well cover, and any other openings in the top of the guidepole well.
- (11) Ladder-slotted guidepole combination wells must be equipped with a gasketed sliding well cover and a ladder sleeve. The sliding well cover must be designed to be closed at all times with no visible gaps, except when gauging or sampling.
- (12) Unslotted guidepoles must be equipped with one of the controls specified in paragraph (b)(12)(i) or (ii) of this section. The controls must be designed to be closed at all times with no visible gaps.
 - (i) A gasketed guidepole cover at the top of the guidepole; a gasketed sliding well cover; and a pole sleeve. The guidepole cover must be closed at all times, except when required to be opened for access. The gasketed sliding well cover must seal any openings between the well cover and the guidepole, any openings between the well cover and any other objects that pass through the well cover, and any other openings in the top of the guidepole well.
 - (ii) A gasketed guidepole cover at the top of the guidepole; a gasketed sliding well cover; and a pole wiper. The guidepole cover must be closed at all times, except when required to be opened for access. The gasketed sliding well cover must seal any openings between the well cover and the guidepole (e.g., pole wiper), any openings between the well cover and any other objects that pass through the well cover, and any other openings in the top of the guidepole well.
- (13) Except for leg sleeves and stub drains, each opening in the internal floating roof not specified in paragraphs (b)(4) through (12) of this section, must be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device must be opened for access. The cover or lid must be equipped with a gasket.
- (14) For each modified storage vessel as specified in § 60.110c(d) with an existing internal floating roof, you may elect to comply with the rim seal system requirements in § 60.112b(a)(1)(ii) or § 60.110b(e) instead of the requirements in paragraph (b)(2) of this section, and you may elect to comply with the gauge hatch/sample well requirements in § 60.112b(a)(1)(vii) or § 60.110b(e) instead of the requirements in paragraph (b)(6) of this section.
- (15) A system equivalent to those described in paragraphs (b)(1) through (14) of this section, as applicable, as provided in § 60.114c.
- (16) Equip, maintain, and operate each internal floating roof control system to maintain the vapor concentration above the floating roof at or below 25 percent of the lower explosive limit (LEL) on a 5-minute rolling average basis without the use of purge gas. This standard may require additional controls, such as improved seam seals, beyond those specified in paragraphs (b)(1) through (15) of this section. Compliance with this paragraph (b)(16) must be determined using the methods in § 60.113c(a)(3). Exceeding the LEL is considered an inspection failure under § 60.113c(a)(2)(i) and must be remedied as such. Any repairs made must be confirmed effective through re-monitoring of the LEL and meeting the limits in this paragraph (b)(16) within the timeframes specified in § 60.113c(a)(2)(i).

- (c) **Requirements for an external floating roof.** You must equip and operate each external floating roof as specified in paragraphs (c)(1) through (4) of this section.
- (1) The roof must be floating on the liquid at all times (i.e., off the roof supports) except during initial fill until the roof is lifted off roof supports and when the storage vessel is completely emptied or subsequently emptied and refilled. The process of filling, emptying, or refilling when the roof is resting on the roof supports must be continuous and must be accomplished as rapidly as possible.
 - (2) Each external floating roof must be equipped with a primary and secondary rim seal system as specified in paragraph (b)(2) of this section, except that if a mechanical shoe primary seal is used, it must be installed so that one end of the shoe extends into the stored VOL and the other end extends a minimum vertical distance of 24 inches (61 centimeters) above the stored organic liquid surface. The external floating roof also must have welded deck seams, and it must have deck fitting controls as specified in paragraphs (c)(2)(i) through (ix) of this section, as applicable. References to an internal floating roof in paragraph (b)(2) of this section means an external floating roof for the purposes of this paragraph (c)(2).
 - (i) Each opening in an external floating roof except for vacuum breaker/automatic bleeder vents and the rim vents is to provide a projection below the liquid surface.
 - (ii) Vacuum breaker/automatic bleeder vents must be equipped with a gasket and are to be closed at all times, with no visible gaps, when the roof is floating. Vacuum breaker/automatic bleeder vents must be set to open only when the roof is being floated off or is being landed on the roof supports.
 - (iii) Rim vents must be equipped with a gasket and must be closed at all times with no visible gaps when the roof is floating. Rim vents must be set to open only when the external floating roof is not floating or when the pressure beneath the rim seal system exceeds the manufacturer's recommended setting.
 - (iv) Each penetration of the external floating roof for the purpose of sampling must be a gauge hatch/sample well. The gauge hatch/sample well must have a gasketed cover, which must be closed at all times, with no visible gaps, except when the hatch or well must be opened for access.
 - (v) Each access hatch and gauge float well must be equipped with a cover that is gasketed and that is bolted or otherwise mechanically secured. The cover must be closed and must be bolted or otherwise mechanically secured at all times, with no visible gaps, except when the hatch or well must be opened for access.
 - (vi) Except as specified in paragraph (c)(3) of this section, if the external floating roof does not have a liquid-mounted primary seal, all guidepoles must be unslotted and must be equipped as specified in paragraph (b)(12) of this section.
 - (vii) Except as specified in paragraph (c)(3) of this section, if the external floating roof has a liquid-mounted primary seal, equip each guidepole as specified in paragraphs (c)(2)(vii)(A) and (B) of this section.
 - (A) Each slotted guidepole must be equipped as specified in paragraphs (b)(10)(ii) or (iv) of this section.
 - (B) Each unslotted guidepole must be equipped as specified in paragraph (b)(12) of this section.

- (viii) Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.
- (ix) Except for leg sleeves, each opening in the external floating roof not subject to controls specified in paragraphs (c)(2)(i) through (viii) of this section must be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap), except when the device must be opened for access. The cover or lid must be equipped with a gasket.
- (3) For each modified storage vessel as specified in § 60.110c(d) with an existing external floating roof, you may elect to comply with any of the guidepole controls specified in paragraphs (b)(10) and (12) of this section regardless of the type of primary seal used.
- (4) A system equivalent to those described in paragraphs (c)(1) through (3) of this section as provided in § 60.114c.
- (d) **Requirements for closed vent system routed to a control device, fuel gas system, or process.** You must design, install, and operate each affected storage vessel with a closed vent system that routes to a control device, fuel gas system, or process as specified in paragraphs (d)(1) through (7) of this section.
 - (1) The storage vessel must be designed and operated to be routed through a closed vent system to a control device, fuel gas system, or process at all times the storage vessel contains VOL without venting to the atmosphere through either meeting the storage vessel design requirements specified in paragraph (d)(1)(i) of this section or the vapor recovery system design requirements specified in paragraph (d)(1)(ii) of this section. Compliance with this requirement must be demonstrated according to paragraph (d)(1)(iii) of this section. Any vacuum breaking device on the storage vessel must close while the storage vessel is still under vacuum of at least -0.1 inches of water (-0.0036 psig or -0.025 kPa gauge).
 - (i) The storage vessel must be designed to operate at a gauge pressure of no less than 1 psi greater than the maximum true vapor pressure of the stored liquid and any back pressure anticipated when the storage vessel is filled at its maximum rate without venting to the atmosphere.
 - (ii) The vapor recovery system must be designed and operated to maintain the pressure in each storage vessel routed to a control device below the venting pressure of that storage vessel.
 - (iii) You must equip each pressure relief device and vacuum breaking device on a storage vessel with a device(s) or use a monitoring system that is capable of meeting the requirements in paragraphs (d)(1)(iii)(A) through (C) of this section. If all emissions from a pressure relief device are routed through a closed vent system to a control device, process, or fuel gas system, then you are not required to comply with the requirements of this paragraph (d)(1)(iii).
 - (A) Identifying the pressure release.
 - (B) Recording the time and duration of each pressure release.
 - (C) Notifying operators immediately that a pressure release is occurring. The device or monitoring system must be either specific to the pressure relief device or vacuum breaking device itself or must be associated with each storage vessel to indicate a pressure release to the atmosphere. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor.

- (2) Except for closed vent systems operated and maintained under negative pressure, each closed vent system must meet the requirements specified in paragraphs (d)(2)(i) through (iii) of this section.
 - (i) The closed vent system must be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 parts per million by volume (ppmv) above background, as determined using Method 21 of appendix A-7 to this part as specified in § 60.113c(c)(2) and (3), and as determined by observations for visible, audible, and olfactory indications of leaks. Visible, audible, and olfactory inspections must be performed quarterly and Method 21 of appendix A-7 instrument monitoring must be conducted at least annually.
 - (ii) Except for pressure relief devices and except for open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in § 60.482-6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as § 60.482-6(a)(2), (b), and (c), you must comply with the provisions of either paragraph (d)(2)(ii)(A) or (B) of this section for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.
 - (A) Properly install, maintain, and operate a flow indicator that is capable of taking readings every 15 minutes. Install the flow indicator at the entrance to any bypass line.
 - (B) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.
 - (iii) You must equip each pressure relief device on a closed vent system with a device(s) or use a monitoring system that is capable of meeting the requirements in paragraphs (d)(2)(iii)(A) through (C) of this section. If all releases and potential leaks from a pressure relief device are routed through a closed vent system to a control device, process, or fuel gas system, then you are not required to comply with the requirements of this paragraph (d)(2)(iii).
 - (A) Identifying the pressure release.
 - (B) Recording the time and duration of each pressure release.
 - (C) Notifying operators immediately that a pressure release is occurring. The device or monitoring system must be either specific to the pressure relief device itself or must be associated with the process system or piping, sufficient to indicate a pressure release to the atmosphere. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor.
- (3) If you route emissions from a storage vessel to a control device, the control device must be designed and operated to reduce inlet VOC emissions by 98 percent or greater. If a flare is used as the control device or if an enclosed combustion device is used for which you elect to comply with the flare operating limits, you must meet the specifications described in paragraph (d)(5) of this section. The control device must be operated at all times when emissions from an affected storage vessel are routed to it except as provided in paragraph (d)(7) of this section.
- (4) A system equivalent to those described in paragraphs (d)(1) through (3) of this section as provided in § 60.114c.

- (5) If you route from a storage vessel to a flare or enclosed combustion device for which you elect to comply with these flare operating limits, you must meet all applicable requirements specified in 40 CFR 63.670(b) through (g) and (i) through (n) except as provided in paragraphs (d)(5)(i) through (v) of this section.
 - (i) For the purpose of this subpart,
 - (A) The term “regulated materials” refers to “vapors from a storage vessel affected facility”;
 - (B) The term “pilot flame” means “pilot flame or flare flame”;
 - (C) The terms “petroleum refinery” and “refinery” mean “storage vessel affected facility”.
 - (ii) For visible emissions, use the following text instead of 40 CFR 63.670(c): The owner or operator shall operate with no visible emissions, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours, when regulated material is routed to the flare. You must monitor for visible emissions from the flare as specified in § 60.113c(c)(1)(iv)(A).
 - (iii) The phrase “and the flare vent gas flow rate is less than the smokeless design capacity of the flare” in 40 CFR 63.670(d) for flare tip velocity requirements does not apply.
- (6) If you route emissions from a storage vessel to a fuel gas system or process, you must meet the requirements in paragraphs (d)(6)(i) through (iv) of this section, as applicable.
 - (i) The fuel gas system or process must be operating at all times when emissions from an affected storage vessel are routed to it.
 - (ii) If all emissions are routed to a process, the VOL in the emissions must meet one or more of the conditions specified in paragraphs (d)(6)(ii)(A) through (D) of this section and you must comply with the compliance demonstration requirements in paragraph (d)(6)(iii) of this section.
 - (A) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process.
 - (B) Transformed by chemical reaction into materials that are not regulated materials.
 - (C) Incorporated into a product.
 - (D) Recovered.
 - (iii) To demonstrate compliance with paragraph (d)(6)(ii) of this section for an affected storage vessel, you must prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the conditions specified in paragraphs (d)(6)(ii)(A) through (D) of this section are being met.
 - (iv) If emissions from an affected storage vessel are routed to a fuel gas system, you must submit the statement of connection for fuel gas systems specified in § 60.116c(a)(7).
- (7) To the extent practical, routine maintenance on the control device should be conducted when the storage vessel(s) is(are) out of VOL service. If you comply with all the provisions in paragraphs (d)(7)(i) through (iv) of this section, you may conduct routine maintenance on a control device while one or more storage vessels vented to the control device are storing a VOL.
 - (i) The storage vessel(s) storing VOL must be designed to operate above the maximum true vapor pressure of the stored VOL according to paragraph (d)(1)(i) of this section.

- (ii) The control device must be isolated from the storage vessel(s) using valves(s), blind flange(s), or similar device(s) at the control device or in the closed vent system as near as practical to the control device. You may purge the control device and downstream portion of the closed vent system to remove potentially explosive vapors and create a safe work environment only after the control device is isolated from the storage vessel(s).
 - (iii) You must continue to comply with the bypass and pressure relief device monitoring requirements in paragraphs (d)(1)(iii), (d)(2)(ii), and (d)(2)(iii) of this section and their associated recordkeeping and reporting requirements. If there are multiple storage vessels connected to the closed vent system with significantly different pressure design limits, you must isolate individual storage vessels to prevent venting during planned maintenance. Compliance with this paragraph (d)(7)(iii) may limit VOL addition to the storage vessel. If VOL is added to the storage vessel, there must be an approximately equivalent withdrawal of VOL such that the liquid level does not rise sufficiently to increase the pressure in the storage vessel to cause a pressure release from the storage vessel or the closed vent system.
 - (iv) During this routine maintenance period the affected storage vessels cannot be actively degassed. If the storage vessel is to be emptied and actively degassed, the planned maintenance activity must be conducted when the storage vessel is out of VOL service.
- (e) **Requirements for storage vessel degassing.** For each storage vessel meeting the specifications in paragraph (a)(3) of this section, you must meet the requirements in paragraphs (e)(1) through (3) of this section during emptying and degassing of a storage vessel until the vapor space concentration in the storage vessel is less than 10 percent of the LEL or, for nonflammable liquids, 5,000 ppmv as methane. You must determine the LEL or methane concentration using process instrumentation or a portable measurement device and follow procedures for calibration and maintenance according to manufacturer's specifications. You must check instrument calibration and check the instrumental offset response each day the instrument is used and prior to discontinuing controlled degassing to confirm the accuracy of the instrument's readings.
- (1) Remove liquids from the storage vessel as much as practicable. Chemicals or a diluent such as a distillate fuel may be introduced into the storage vessel for the purpose of reducing vapor concentration before or during active degassing.
 - (2) Comply with one of the following:
 - (i) Reduce total VOC emissions by venting emissions through a closed vent system to a flare or enclosed combustion device for which you elect to comply with the flare provisions and meet the requirements specified in paragraph (d)(5) of this section.
 - (ii) Reduce total VOC emissions by 98 weight percent by venting emissions through a closed vent system to any combination of non-flare control devices.
 - (iii) Reduce total VOC emissions by routing emissions to a fuel gas system or process and meet the requirements specified in paragraph (d)(6) of this section.
 - (3) For floating roof storage vessels, the storage vessel may be opened to set up equipment (e.g., making connections to a temporary control device) for the shutdown operations but must not be actively degassed during this time period.

§ 60.113c Testing, monitoring, and inspection procedures.

For each storage vessel subject to the provision in § 60.112c(a), you must meet the requirements of paragraph (a) of this section if you installed an internal floating roof, paragraph (b) of this section if you installed an external floating roof, or paragraph (c) of this section if you route emissions through a closed vent system to a control device, fuel gas system, or process. You must also meet the applicable requirements of paragraph (d) of this section.

- (a) **Requirements for an internal floating roof.** After installing the control equipment for an internal floating roof to meet the provisions in § 60.112c(b), you must meet the requirements specified in paragraphs (a)(1) through (5) of this section.
 - (1) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), and deck fittings prior to filling the storage vessel with VOL. Any of the conditions described in paragraphs (a)(1)(i) through (iii) of this section constitutes inspection failure. You must repair the items before filling the storage vessel.
 - (i) Holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric;
 - (ii) Defects in the internal floating roof; or
 - (iii) A rim seal or deck fitting control not meeting the applicable requirements in § 60.112c(b)(2) through (13).
 - (2) Inspect the internal floating roof as specified in paragraph (a)(2)(i) of this section at least once every 12 calendar months after initial fill, and inspect the internal floating roof as specified in paragraph (a)(2)(ii) of this section each time the storage vessel is emptied and degassed, or at a frequency no greater than every 120 calendar months, whichever occurs first.
 - (i) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is service), and deck fittings, through openings in the fixed roof and conduct LEL monitoring. Any of the conditions described in paragraphs (a)(2)(i)(A) through (F) of this section constitutes inspection failure. Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel. You must repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph (a)(2)(i) cannot be repaired within 45 days and if the storage vessel cannot be emptied within 45 days, you may request a 30-day extension from the Administrator. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the storage vessel will be emptied as soon as possible.
 - (A) Stored liquid on the floating roof;
 - (B) The internal floating roof is not resting on the surface of the VOL inside the storage vessel;
 - (C) Holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric;
 - (D) Defects in the internal floating roof;
 - (E) A rim seal or deck fitting control not meeting the applicable requirements in § 60.112c(b)(2) through (13); or
 - (F) The concentration measured according to paragraph (a)(3) of this section exceeds 25 percent of the LEL.

- (ii) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any). Any of the conditions described in paragraphs (a)(2)(ii)(A) through (C) of this section constitutes an inspection failure. You must repair the items as necessary so that none of the conditions specified in this paragraph (a)(2)(ii) exist before refilling the storage vessel with VOL. The inspection may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck fittings and rim seal system specified in § 60.112c(b). You must repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph (a)(2)(ii) cannot be repaired within 45 days and if the storage vessel cannot be emptied within 45 days, you may request a 30-day extension from the Administrator. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the storage vessel will be emptied as soon as possible.
 - (A) Defects in the internal floating roof;
 - (B) Holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric; or
 - (C) A rim seal or deck fitting control not meeting the applicable requirements in § 60.112c(b)(2) through (13).
- (3) Compliance with the LEL limit for internal floating roof storage vessels at § 60.112c(b)(16) must be determined based on the procedures specified in paragraphs (a)(3)(i) through (v) of this section. If tubing is necessary to obtain the measurements, the tubing must be non-crimping and made of Teflon or other inert material.
 - (i) You must conduct LEL monitoring as part of the annual inspection specified in paragraph (a)(2)(i) of this section and at other times upon request by the Administrator. If the measurement cannot be performed during the visual inspection due to wind speeds exceeding those specified in paragraph (a)(3)(iii)(C) of this section, the measurement must be performed within 30 days of the visual inspection. If there is an exceedance of the LEL limit, you must re-monitor in accordance with § 60.112c(b)(16) within 30 days after repair or placing the storage vessel back in service.
 - (ii) The calibration of the LEL meter must be checked per manufacturer specifications immediately before and after the measurements as specified in paragraphs (a)(3)(ii)(A) and (B) of this section. If tubing will be used for the measurements, the tubing must be attached during calibration so that the calibration gas travels through the entire measurement system.
 - (A) Conduct the span check using a calibration gas recommended by the LEL meter manufacturer. The calibration gas must contain a single hydrocarbon at a concentration of the vapor corresponding to 50 percent of the LEL (e.g., 2.50 percent by volume when using methane as the calibration gas). The vendor must provide a Certificate of Analysis for the gas, and the certified concentration must be within ± 2 percent (e.g., 2.45 percent-2.55 percent by volume when using methane as the calibration gas). The LEL span response must be between 49 percent and 51 percent. If the span check prior to the measurements does not meet this requirement, the LEL meter must be recalibrated or replaced. If the span check after the measurements does not meet this requirement, the LEL meter must be recalibrated or replaced, and the measurements must be repeated.

- (B) Check the instrumental offset response using a certified compressed gas cylinder of zero air or an ambient environment that is free of organic compounds. The pre-measurement instrumental offset response must be 0 percent LEL. If the LEL meter does not meet this requirement, the LEL meter must be recalibrated or replaced.
- (iii) Conduct the monitoring measurements as specified in paragraphs (a)(3)(iii)(A) through (D) of this section.
 - (A) Measurements of the vapors within the internal floating roof storage vessel must be collected no more than 3 feet above the internal floating roof.
 - (B) Measurements must be taken for a minimum of 20 minutes, logging the measurements at least once every 15 seconds, or until one 5-minute average as determined according to paragraph (a)(3)(v)(B) of this section exceeds the limit specified in § 60.112c(b)(16).
 - (C) Measurements shall be taken when the wind speed at the top of the storage vessel is 5 mph or less to the extent practicable, but in no case shall measurements be taken when the sustained wind speed at top of storage vessel is greater than the annual average wind speed at the site or 15 mph, whichever is less.
 - (D) Measurements should be conducted when the internal floating roof is floating with limited product movement (limited filling or emptying of the storage vessel).
- (iv) To determine the actual concentration of the vapor within the storage vessel, the percent of the LEL "as the calibration gas" must be corrected according to one of the procedures in paragraph (a)(3)(iv)(A) or (B) of this section. Alternatively, if the LEL meter used has correction factors that can be selected from the meter's program, you may enable this feature to automatically apply one of the correction factors in paragraph (a)(3)(iv)(A) or (B) of this section.
 - (A) Multiply the measurement by the published vapor correction factor for the specific LEL meter, stored VOL, and calibration gas used; or
 - (B) If there is no published correction factor for the specific LEL meter used and the vapors of the stored VOL, multiply the measurement by the published correction factor for butane as a surrogate for determining the LEL of the vapors of the stored VOL. The correction factor must correspond to the calibration gas used.
- (v) Use the calculation procedures in paragraphs (a)(3)(v)(A) through (C) of this section to determine compliance with the LEL limit.
 - (A) For each minute while measurements are being taken, determine the 1-minute average reading as the arithmetic average of the corrected individual measurements (taken at least once every 15 seconds) during the minute.
 - (B) Starting with the end of the fifth minute of data, calculate a 5-minute rolling average as the arithmetic average of the previous five 1-minute readings determined under paragraph (a)(3)(v)(A) of this section. Determine a new 5-minute average reading for every subsequent 1-minute reading.
 - (C) Each 5-minute rolling average must meet the LEL limit specified in § 60.112c(b)(16).
- (4) Notify the Administrator as specified in § 60.116c(b) at least 30 days prior to the inspection of each storage vessel for which an inspection is required by paragraph (a)(1) or (a)(2)(ii) of this section to afford the Administrator the opportunity to have an observer present.

(5) You must equip each affected storage vessel that has an internal floating roof with an alarm system that provides a visual or audible signal that alerts the operator when the internal floating roof is approaching the landed height and that provides a separate visual or audible signal to alert the operator when the roof has landed. The roof is considered landed when the floating roof first rests on supports or when the vacuum breaker/automatic bleeder vent begins to open, whichever is first (for example, when using a leg-actuated vent that triggers the vent prior to resting on the roof supports).

(b) **Requirements for an external floating roof.** After installing the control equipment for an external floating roof to meet the provisions in § 60.112c(c), you must inspect the external floating roof according to the specifications in paragraphs (b)(1) through (8) of this section.

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the frequency provided in paragraphs (b)(1)(i) and (ii) of this section. You must visually inspect all roof fittings to ensure that covers are closed and gasketed with no visible gaps and that there are no tears in sleeves, wipers, or similar controls used for a given fitting during each measurement of gaps as required under this paragraph (b)(1).

(i) Measurements of gaps between the storage vessel wall and the primary seal (seal gaps) must be performed during the hydrostatic testing of the storage vessel or within 60 days of the initial fill with VOL and at least once every 60 calendar months thereafter.

(ii) Measurements of gaps between the storage vessel wall and the secondary seal must be performed within 60 days of the initial fill with VOL and at least once every 12 calendar months thereafter.

(iii) If any source ceases to store VOL for a period of 12 calendar months or more, subsequent introduction of VOL into the storage vessel must be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof supports.

(ii) Measure seal gaps around the entire circumference of the storage vessel in each place where a 0.125-inch (0.32-centimeter (cm)) diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section must be determined by using probes of various widths to measure accurately the actual distance from the storage vessel wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the storage vessel and compare each ratio to the respective standards in paragraph (b)(4) of this section.

- (4) Except as provided in paragraph (b)(5) of this section, make necessary repairs or empty the storage vessel within 45 days of identification in any inspection failure as specified in paragraphs (b)(4)(i) through (iii) of this section.
 - (i) For primary seals, any deviation of the requirements in paragraphs (b)(4)(i)(A) through (D) of this section is an inspection failure.
 - (A) The accumulated area of gaps between the storage vessel wall and the mechanical shoe or liquid-mounted primary seal must not exceed 10 square inches (in²) per foot of storage vessel diameter (212 square centimeters (cm²) per meter of storage vessel diameter).
 - (B) The maximum width of any portion of any gap must not exceed 1.5 inches (3.81 cm).
 - (C) If a mechanical shoe seal is used, one end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 2 feet (61 cm) above the stored liquid surface.
 - (D) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
 - (ii) For secondary seals, any deviation of the requirements in paragraphs (b)(4)(ii)(A) through (D) of this section is an inspection failure.
 - (A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the storage vessel wall except for allowed gaps as provided in paragraphs (b)(4)(ii)(B) and (C) of this section.
 - (B) The accumulated area of gaps between the storage vessel wall and the secondary seal must not exceed 1 in² per foot (21.2 cm² per meter) of storage vessel diameter.
 - (C) The maximum width of any portion of any gap must not exceed 0.5 inches (1.27 cm).
 - (D) There are to be no holes, tears, or other openings in the seal or seal fabric.
 - (iii) For roof fittings (e.g., vacuum breaker/automatic bleeder vents and rim vents, gauge hatch/sample wells, access hatches, guidepoles, ladders, and emergency roof drains), any deviation of the requirements in paragraphs (b)(4)(iii)(A) through (D) of this section is an inspection failure.
 - (A) Each opening in an external floating roof except for vacuum breaker/automatic bleeder vents and the rim vents provides a projection below the liquid surface.
 - (B) Vacuum breaker/automatic bleeder vents and rim vents are equipped with a gasket and are closed with no visible gaps when the roof is floating.
 - (C) The gauge hatch/sample well, access hatch, and gauge float must have a gasketed cover and closed with no visible gaps.
 - (D) There are to be no tears or visible defects of sleeves, wipers, or fabric covers used to control emissions from a roof fitting.
- (5) If a failure that is detected as specified in paragraph (b)(4) of this section cannot be repaired within 45 days and if the storage vessel cannot be emptied within 45 days, you may request a 30-day extension from the Administrator. Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the storage vessel will be emptied as soon as possible.

- (6) Notify the Administrator, as specified in § 60.116c(b)(2), 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.
- (7) Visually inspect the external floating roof, primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.
 - (i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, the secondary seal has holes, tears, or other openings in the seal or the seal fabric, covers have visible openings or missing or torn gaskets, or there are tears or other visible defects in flexible covers, sleeves, wipers, or other fitting controls, you must repair the items as necessary so that none of the conditions specified in this paragraph (b)(7)(i) exist before filling or refilling the storage vessel with VOL.
 - (ii) For each inspection required by paragraph (b)(7) of this section, notify the Administrator as specified in § 60.116c(b)(1) at least 30 days prior to the inspection of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel.
- (8) You must equip each affected storage vessel that has an external floating roof with an alarm system that provides a visual or audible signal that alerts the operator when the external floating roof is approaching the landed height and that provides a separate visual or audible signal to alert the operator when the roof has landed. The roof is considered landed when the floating roof first rests on supports or when the vacuum breaker/automatic bleeder vent begins to open, whichever is first (for example, when using a leg-actuated vent that triggers the vent prior to resting on the roof supports).
- (c) **Requirements for closed vent systems routed to a control device, fuel gas system, or process.** For each source that is equipped with a closed vent system and routes to a control device, fuel gas system, or process to meet the requirements in § 60.112c(d), you must conduct performance testing and monitoring of the control device as specified in paragraph (c)(1) of this section, conduct monitoring and inspections of the closed vent system as specified in paragraph (c)(2) of this section, repair leaks as specified in paragraph (c)(3) of this section, and develop a monitoring plan as specified in paragraph (c)(4) of this section.
 - (1) For each control device used to meet the requirements in § 60.112c(d), you must comply with the requirements in paragraphs (c)(1)(i) through (iv) of this section, as applicable.
 - (i) For each enclosed combustion device or flare, you must install, calibrate, maintain, and operate a backpressure regulator valve calibrated to open at the minimum pressure set point corresponding to the minimum inlet gas flow rate. The set point must be consistent with manufacturer specifications for minimum flow or pressure and must be supported by an engineering evaluation. At least annually, you must confirm that the backpressure regulator valve set point is correct and consistent with the engineering evaluation and manufacturer specifications and that the valve fully closes when not in the open position.
 - (ii) For each control device other than a flare, except as specified in paragraph (c)(1)(iii) of this section, you must conduct a performance test as specified in paragraphs (c)(1)(ii)(A) through (E) of this section not later than 180 days after becoming subject to § 60.112c(d). You must conduct subsequent performance tests within 60 calendar months after each previous performance test. Submit the results of all performance tests following the procedures in § 60.116c(e).

- (A) Each performance test must demonstrate that the control device achieves greater than or equal to the required control device performance level specified in § 60.112c(d)(3). Performance tests must be conducted under such conditions as the Administrator specifies based on representative performance of the affected source for the period being tested. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent the entire range of normal operation, including operational conditions for maximum emissions if such emissions are not expected during maximum production. You must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
- (B) You must conduct a minimum of three test runs. Each test run must be at least 1 hour long.
- (C) The following methods in appendix A to this part, except as provided in § 60.8(b), must be used as reference methods to determine compliance with the percent reduction requirement.
- (1) Method 1 or 1A of appendix A-1 to this part, as appropriate, for selection of the sampling sites. Sampling sites must be located at the inlet of the first control device and at the outlet of the final control device to determine compliance with a control device percent reduction requirement.
- (2) Method 2, 2A, 2C, or 2D of appendix A-1 to this part, as appropriate to determine the gas volumetric flow rate.
- (3) Method 25A of appendix A-7 to this part. Use propane as the calibration gas. You must use Method 4 of appendix A-3 to this part to convert the Method 25A of appendix A-7 results to a dry basis.
- (D) You must use the procedures in paragraphs (c)(1)(ii)(D)(1) and (2) of this section to calculate percent reduction efficiency.
- (1) You must compute the mass rate of TOC using the following equations:

$$E_i = K_2 C_i M_p Q_i$$

$$E_o = K_2 C_o M_p Q_o$$

Equations 1 and 2 to Paragraph (c)(1)(ii)(D)(1)

Where:

E_i , E_o = Mass rate of TOC at the inlet and outlet of the control device, respectively, dry basis, kilograms per hour.

K_2 = Constant, 2.494×10^{-6} (parts per million) (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 degrees Celsius.

C_i , C_o = Concentration of TOC, as propane, of the gas stream as measured by Method 25A of appendix A-7 to this part at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

M_p = Molecular weight of propane, 44.1 gram/gram-mole.

Q_i, Q_o = Flowrate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

(2) You must calculate the percent reduction in TOC as follows:

$$R_{cd} = \frac{E_i - E_o}{E_i} \times 100\%$$

Equation 3 to Paragraph (c)(1)(ii)(D)(2)

Where:

R_{cd} = Control efficiency of control device, percent.

E_i = Mass rate of TOC at the inlet to the control device as calculated under paragraph (c)(1)(ii)(D)(1) of this section, kilograms per hour.

E_o = Mass rate of TOC at the outlet of the control device, as calculated under paragraph (c)(1)(ii)(D)(1) of this section, kilograms per hour.

(E) Except as provided in paragraph (c)(1)(ii)(E)(5) of this section, you must establish the applicable operating parameter limit as specified in paragraphs (c)(1)(ii)(E)(1) through (3) of this section by calculating the value(s) as the arithmetic average of operating parameter measurements recorded during the three test runs conducted for the most recent performance test (the average of the test run averages). You may operate outside of the established operating parameter limit(s) during subsequent performance tests in order to establish new operating limits. You must include the updated operating limits with the performance test results submitted to the Administrator pursuant to § 60.116c(e). Upon establishment of a new operating limit, you must thereafter operate under the new operating limit. You must demonstrate compliance with your operating parameter according to paragraph (c)(1)(ii)(E)(4) of this section.

(1) If you use an enclosed combustion device, a boiler, or a process heater other than those specified in paragraph (c)(1)(iii) of this section to control emissions, you must set a minimum firebox temperature limit during the performance test. You must continuously monitor the firebox temperature with a temperature monitoring device installed in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs and equipped with a continuous recorder that records a reading at least once every 15 minutes. The monitoring device must have a minimum accuracy of ± 1 percent of the temperature being monitored in degrees Celsius, or ± 2.5 degrees Celsius, whichever value is greater.

(2) If you use a catalytic incinerator other than those specified in paragraph (c)(1)(iii) of this section to control emissions, you must set a minimum temperature limit on the temperature at the inlet of the catalyst bed and a minimum temperature limit on the temperature difference between the catalyst bed outlet and inlet. You must

continuously monitor the temperatures with a temperature monitoring device equipped with a continuous recorder that records a reading at least once every 15 minutes. The device must be capable of monitoring temperature at two locations and have a minimum accuracy of ± 1 percent of the temperature being monitored in degrees Celsius, or ± 2.5 degrees Celsius, whichever value is greater. You must install one temperature sensor in the vent stream at the nearest feasible point to the catalyst bed inlet, and you must install a second temperature sensor in the vent stream at the nearest feasible point to the catalyst bed outlet. You must install the temperature sensor at a location representative of the firebox temperature.

- (3) If you use a control device other than a flare or other than a device listed in paragraphs (c)(1)(ii)(E)(1), (c)(1)(ii)(E)(2), (c)(1)(ii)(E)(5), or (c)(1)(iii) to control emissions, you must submit the operating parameters you plan to monitor in the performance test notice you provide to the Administrator pursuant to § 60.8(d).
 - (4) Using the continuous monitoring system (CMS) data, you must calculate the hourly average of each operating parameter. You must demonstrate compliance by maintaining the operating parameter at or above the minimum operating parameter limit on a 3-hour rolling average basis. For each hour, calculate the hourly value of the operating parameter from your CMS. Average the three most recent hours of data to determine the 3-hour average. Determine the 3-hour rolling average by recalculating the 3-hour average each hour. You must not include periods of data collected during monitoring system breakdowns, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy in the operating parameter averages.
 - (5) For enclosed combustion devices for which you elect to comply with the flare requirements in § 60.112c(d)(5), you must comply with the monitoring provisions in paragraph (c)(1)(iv) of this section instead of paragraphs (c)(1)(ii)(E)(1) through (4) of this section.
- (iii) No performance test is required for the control devices identified in paragraphs (c)(1)(iii)(A) through (C) of this section.
- (A) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater.
 - (B) A boiler or process heater into which the vent stream is introduced with the primary fuel.
 - (C) A boiler, process heater, or incinerator burning hazardous waste, which is regulated under 40 CFR part 63, subpart EEE; part 264; part 265; or part 266.
- (iv) For each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112c(d) or enclosed combustion device electing to comply with the requirements in § 60.112c(d)(5), you must conduct visible emission observations as specified in paragraph (c)(1)(iv)(A) of this section and install, operate, and maintain CMS for flares following the requirements specified in 40 CFR 63.671 and as specified in paragraphs (c)(1)(iv)(B) and (C) of this section.
- (A) If visible emissions are observed for more than 1 continuous minute during normal duties, visible emissions observation using Method 22 of appendix A-7 to this part must be conducted for 2 hours or until 5-minutes of visible emissions are observed.

- (B) Substitute "pilot flame or flare flame" for each occurrence of "pilot flame."
- (C) As an alternative to determining the flare tip velocity rate for each 15-minute block to determine compliance with the flare tip velocity operating limit as specified in 40 CFR 63.670(k)(2), you may elect to conduct a one-time flare tip velocity operating limit compliance assessment as provided in paragraphs (c)(1)(iv)(C)(1) through (4) of this section. If the flare or storage vessel control configurations change (e.g., flare tip modified or additional storage vessel or other sources are added for which vapors are directed to the flare), you must repeat this one-time assessment based on the new configuration.
 - (1) Determine the unobstructed cross-sectional area of the flare tip, in units of square feet, as specified in 40 CFR 63.670(k)(1).
 - (2) Determine the maximum flow rate, in units of cubic feet per second, based on the maximum cumulative loading rate for a 15-minute block period considering maximum filling rates for all storage vessel affected facilities controlled by the flare and, if applicable, considering the maximum release pressure of any other vapors directed to the flare.
 - (3) Calculate the maximum flare tip velocity as the maximum flow rate from paragraph (c)(1)(iv)(C)(2) of this section divided by the unobstructed cross-sectional area of the flare tip from paragraph (c)(1)(iv)(C)(1) of this section.
 - (4) Demonstrate that the maximum flare tip velocity as calculated in paragraph (c)(1)(iv)(C)(3) of this section is less than 60 feet per second.
- (2) For each closed vent system, you must conduct the instrument monitoring in paragraphs (c)(2)(i) through (iii) of this section. You must conduct the initial instrument monitoring within 180 days of an affected facility being connected to the closed vent system. Subsequent instrument inspections must be conducted within 365 days of the previous inspection. Visual, audible, and olfactory inspections must be conducted quarterly.
 - (i) Conduct instrument monitoring using the procedures in Method 21 of appendix A-7 to this part. The detection instrument must meet the performance criteria of Method 21 of appendix A-7, except that the instrument response factor criteria in section 8.1.1 of Method 21 of appendix A-7 must be for the average composition of the fluid and not for each individual organic compound in the stream. For streams that contain nitrogen, air, water, or other inerts that are not organic VOC, the representative stream response factor must be determined on an inert-free basis. The instrument reading that defines a leak is 500 ppmv (as methane). The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A-7. The calibration gases in paragraphs (c)(2)(i)(A) and (B) of this section must be used. The drift assessment specified in paragraph (c)(2)(i)(C) of this section must be performed at the end of each monitoring day.
 - (A) Zero air (less than 10 ppm of hydrocarbon in air).
 - (B) A mixture of methane in air at a concentration of approximately 500 ppmv.
 - (C) At the end of each monitoring day, check the instrument using the same calibration gas that was used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 to this part, section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. If multiple scales are used, record the

instrument reading for each scale used. Divide the arithmetic difference of the initial and post-test calibration response by the corresponding calibration gas value for each scale and multiply by 100 to express the calibration drift as a percentage. If a calibration drift assessment shows a negative drift of more than 10 percent, then re-monitor all equipment monitored since the last calibration with instrument readings between the leak definition and the leak definition multiplied by (100 minus the percent of negative drift) divided by 100. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment with instrument readings above the leak definition and below the leak definition multiplied by (100 plus the percent of positive drift) divided by 100 monitored since the last calibration may be re-monitored.

- (ii) Any parts of the closed vent system that are designated as unsafe to inspect are exempt from the inspection requirements of paragraph (c)(2)(i) of this section if the conditions of paragraphs (c)(2)(ii)(A) and (B) of this section are met.
 - (A) The owner or operator determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (c)(2)(i) of this section; and
 - (B) The owner or operator has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.
- (iii) Any parts of the closed vent system that are designated as difficult-to-inspect are exempt from the inspection requirements of paragraph (c)(2)(i) of this section if the provisions of paragraphs (c)(2)(iii)(A) and (B) of this section apply.
 - (A) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and
 - (B) The owner or operator has a written plan that requires inspection of the equipment at least once every 60 calendar months.
- (3) Leaks, as indicated by an instrument reading greater than 500 ppmv or emissions detected by visible, audible, and olfactory methods, shall be repaired as soon as practical following the requirements outlined in paragraphs (c)(3)(i) and (ii) of this section.
 - (i) Except as allowed by paragraph (c)(3)(ii) of this section, a first attempt at repair shall be made no later than 5 days after the leak is detected. Repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.
 - (ii) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical.

- (4) You must develop a monitoring plan that covers each CMS used to demonstrate continuous compliance for your control device as outlined in paragraphs (c)(4)(i) and (ii) of this section. You must install, calibrate, operate, and maintain each CMS in accordance with the procedures in your monitoring plan.
 - (i) For each control device other than those specified in paragraph (c)(4)(ii) of this section, your monitoring plan must contain the information required in paragraphs (c)(4)(i)(A) through (G) of this section.
 - (A) The parameter to be monitored and the operating limit for the parameter.
 - (B) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements.
 - (C) Description of the monitoring system specifications, including the detector signal analyzer, data acquisition, and calculations.
 - (D) Equipment performance checks, system accuracy audits, or other audit procedures, including the information in paragraphs (c)(4)(i)(D)(1) through (4) of this section.
 - (1) You must conduct the CMS equipment performance checks, system accuracy audits, or other audit procedures specified in the monitoring plan at least once every 12 calendar months.
 - (2) You must also conduct calibration checks following any period of more than 24 hours throughout which the sensor exceeded the manufacturer's specified maximum range unless you install a new sensor.
 - (3) At least quarterly, you must inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion, unless you use a redundant CMS.
 - (4) Daily checks for indications that the system is responding.
 - (E) Description of how periods of data collected during CMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable), and high-level adjustments will be excluded from operating parameter averages.
 - (F) Ongoing operation and maintenance procedures.
 - (G) Ongoing recordkeeping procedures.
 - (ii) For each flare or enclosed combustion device for which you elect to comply with the flare provisions in § 60.112c(d)(5), your monitoring plan must contain the information required by 40 CFR 63.671(b).
- (d) **Requirements for determining maximum true vapor pressure.** For each affected storage vessel, you must determine the maximum true vapor pressure of the stored VOL according to the requirements specified in paragraphs (d)(1) and (2) of this section. For storage vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For storage vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

- (1) Prior to the initial filling of the storage vessel or to the refilling of the storage vessel with a new VOL, the highest maximum true vapor pressure for the range of anticipated liquids to be stored, including mixtures for which you can define the range of concentrations for constituents in the mixture or with a known maximum Reid vapor pressure, must be determined using any one of the methods described in paragraphs (d)(1)(i) through (iv) of this section.
 - (i) As obtained from standard reference texts.
 - (ii) ASTM D6377-20 (incorporated by reference; see § 60.17). Perform the method using a vapor-to-liquid ratio of 4:1, which is expressed in the method as VPCR.
 - (iii) ASTM D6378-22 (incorporated by reference; see § 60.17). Perform the method using a vapor-to-liquid ratio of 4:1.
 - (iv) As measured by an appropriate method as approved by the Administrator.
- (2) For each affected storage vessel storing a mixture of indeterminate composition or a mixture of unknown variable composition, the initial determination of the vapor pressure required by paragraph (d)(1) of this section must be a physical test using one of the methods specified in paragraphs (d)(1)(ii) through (iv) of this section. Additional physical tests using one of the methods specified in paragraphs (d)(1)(ii) through (iv) of this section are required at least once every 6 calendar months thereafter as long as the measured vapor pressure remains below the applicable thresholds in § 60.110c(c)(1), (c)(2), (d)(1), or (d)(2). If the vapor pressure measured under this paragraph (d)(2) exceeds the threshold defined in § 60.110c(c)(1), (c)(2), (d)(1), or (d)(2) you must meet the requirements in § 60.112c and the corresponding requirements in §§ 60.113c through 60.116c. If the storage vessel does not have controls meeting the requirements in § 60.112c, the storage vessel must be emptied and taken out of service until controls meeting the requirements in § 60.112c can be installed. Upon compliance with the provisions in § 60.112c, no additional vapor pressure monitoring is required.

§ 60.114c Alternative means of emission limitation.

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by the applicable requirement in § 60.112c, the Administrator will publish in the FEDERAL REGISTER a document permitting the use of the alternative means for purposes of compliance with that requirement.
- (b) Any document under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.
- (c) Any person seeking permission under this section must submit to the Administrator a written application including either:
 - (1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure; or
 - (2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.
- (d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emission reduction as specified in § 60.112c.

§ 60.115c Recordkeeping requirements.

- (a) Except as otherwise specified in paragraphs (b) through (d) of this section, you must keep copies of all records required by this section and all reports required under § 60.116c for at least 5 years.
- (b) For each storage vessel affected facility as specified in § 60.110c(a), you must keep readily accessible records for the life of the source showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
- (c) Except as provided in paragraphs (c)(1) and (2) of this section, for each storage vessel affected facility under this subpart, you must maintain a record of the VOL currently stored, including a description of the VOL stored, the date when the VOL was first stored in the storage vessel, and the maximum true vapor pressure of that VOL.
 - (1) For each vessel storing a mixture of indeterminate or variable composition that meets the requirements for vapor pressure measurement at least once every 6 calendar months in § 60.113c(d), you must maintain records of each vapor pressure measurement for 5 years.
 - (2) Each vessel equipped with a closed vent system routed to a control device, fuel gas system, or process meeting the specification of § 60.112c(d) is exempt from the requirements of paragraph (c) of this section.
- (d) For each storage vessel as specified in § 60.112c(a), you must keep records as required in paragraphs (d)(1) through (5) of this section, as applicable depending upon the control equipment installed to meet the requirements of § 60.112c.
 - (1) After installing control equipment for an internal floating roof to meet the provisions in § 60.112c(b), you must keep the following records.
 - (i) Keep a record of each inspection performed as required by § 60.113c(a)(1), (a)(2)(i), and (a)(2)(ii). Each record must identify the storage vessel on which the inspection was performed and must contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
 - (ii) For each LEL monitoring event, keep records as specified in paragraphs (a)(1)(ii)(A) through (I) of this section.
 - (A) Date and time of the LEL monitoring, and the storage vessel being monitored.
 - (B) A description of the monitoring event (annual monitoring conducted concurrent with visual inspection required under § 60.113c(a)(2)(i); re-monitoring due to high winds during annual monitoring; re-monitoring after repair attempt; other monitoring event as required by the Administrator).
 - (C) Wind speed at the top of the storage vessel on the date of LEL monitoring.
 - (D) The LEL meter manufacturer and model number used, as well as an indication of whether tubing was used during the LEL monitoring, and if so, the type and length of tubing used.
 - (E) Calibration checks conducted before and after making the measurements, including both the span check and instrumental offset. This includes the hydrocarbon used as the calibration gas, the Certificate of Analysis for the calibration gas(es), the results of the calibration check, and any corrective action for calibration checks that do not meet the required response.

- (F) Location of the measurements and the location of the floating roof.
 - (G) Each measurement (taken at least once every 15 seconds). The records should indicate whether the recorded values were automatically corrected using the meter's programming. If the values were not automatically corrected, record both the raw (as the calibration gas) and corrected measurements, as well as the correction factor used.
 - (H) Each of the 5-minute rolling average readings.
 - (I) If the vapor concentration of the storage vessel was above 25 percent of the LEL on a 5-minute rolling average basis, a description of whether the floating roof was repaired, replaced, or taken out of service.
- (2) After installing control equipment for an external floating roof to meet the provisions in § 60.112c(c), you must keep a record of each inspection and gap measurement performed as required by § 60.113c(b). The record must contain:
- (i) Identification of the storage vessel on which the inspection was performed;
 - (ii) The date the storage vessel was inspected;
 - (iii) The type of inspection [inspection with gap measurements as specified in § 60.113c(b)(1) through (4); visual inspection as specified in § 60.113c(b)(7)];
 - (iv) The observed condition of each component of the control equipment (seals, internal floating roof, and fittings); and
 - (v) For each inspection with gap measurements as specified in § 60.113c(b)(1) through (4):
 - (A) The raw data obtained in the measurement; and
 - (B) The calculations described in § 60.113c(b)(2) and (b)(3).
- (3) After installing a closed vent system routed to a control device, fuel gas system, or process to comply with the provisions in § 60.112c(d), you must keep the following records, as well as the records in paragraph (d)(4) or (5) of this section, as applicable.
- (i) The make and model of the backpressure regulator valve, date of installation, and inlet flow rating. Maintain records of the engineering evaluation and manufacturer specifications that identify the pressure set point corresponding to the minimum inlet gas flow rate, the annual confirmation that the backpressure regulator valve set point is correct and consistent with the engineering evaluation and manufacturer specifications, and the annual confirmation that the backpressure regulator valve fully closes when not in open position.
 - (ii) The CMS monitoring plan required by § 60.113c(c)(4), if the closed vent system is routed to a control device. Retain this plan for the life of the control equipment.
 - (iii) Monitoring for the closed vent system conducted under § 60.113c(c)(2), including the date of inspection.
 - (iv) The written plan(s) required under § 60.113c(c)(2)(ii) and (iii) for unsafe-to-inspect and difficult-to-inspect portions of the closed vent system.
 - (v) For each leak detected during the monitoring conducted under § 60.113c(c)(2) and (3), you must record: the date the leak was detected; the location of the leak; the method used to detect the leak (Method 21 of appendix A-7 to this part or visible, audible, and olfactory methods); and

the maximum concentration reading obtained by Method 21 of appendix A-7, if applicable. For each repair attempt, you must record: the date of each repair attempt; the actions taken to repair the leak during each repair attempt; and date the repair was completed. If the repair is delayed, you must record the reason for the delay and the date you expect to complete the repair.

- (vi) For each bypass line, maintain a record of the following, as applicable: readings from the flow indicator; each inspection of the seal or closure mechanism; the date and time of each instance when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out.
 - (vii) For each pressure relief device or vacuum breaking device on a storage vessel or closed vent system required to be monitored according to § 60.112c(d)(1)(iii) or (d)(2)(iii): the device type; the monitoring device or system used for the device; data from the device or system indicating whether a pressure release occurred; and the date, time, and duration of each pressure release, if applicable.
- (4) After installing a closed vent system routed to a control device other than a flare or enclosed combustion device electing to comply with § 60.112c(d), you must keep the following records.
- (i) Each performance test.
 - (ii) All CMS performance checks, audits, maintenance, and repairs.
 - (iii) The hourly values recorded by the CMS and all 3-hour rolling averages.
 - (iv) The periods when the CMS is not operational.
- (5) After installing a closed vent system routed to a flare to comply with § 60.112c(d) or an enclosed combustion device for which you elected to comply with § 60.112c(d)(5), you must keep the following records.
- (i) Pilot flame or flare flame monitoring as specified in paragraphs (d)(5)(i)(A) and (B) of this section.
 - (A) The output of the monitoring device used to detect the presence of a pilot flame as required in 40 CFR 63.670(b). Retain these records for a minimum of 2 years.
 - (B) Each 15-minute block during which there was at least 1 minute that no pilot flame was present when VOL vapors were routed to the flare. Each record must identify the start and end time and date of each 15-minute block.
 - (ii) Visible emissions observations as specified in paragraphs (d)(5)(ii)(A) through (B) of this section, as applicable.
 - (A) If visible emissions observations are performed using Method 22 of appendix A-7 to this part, the record must identify the date, the start and end time of the visible emissions observation, and the number of minutes for which visible emissions were observed during the observation. If the owner or operator performs visible emissions observations more than one time during a day, include separate records for each visible emissions observation performed.

- (B) For each 2-hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours but visible emissions observations according to Method 22 of appendix A-7 to this part were not conducted for the full 2-hour period, the record must include the date, the start and end time of the visible emissions observation, and an estimate of the cumulative number of minutes in the 2-hour period for which emissions were visible based on best information available to the owner or operator.
- (iii) Each 15-minute block period during which operating values are outside of the applicable operating limits specified in 40 CFR 63.670(d) through (f) when vapors from a storage vessel affected facility are directed to the flare for at least 15-minutes identifying each specific operating limit that was not met.
- (iv) The 15-minute block average cumulative flows for the enclosed combustion device vent gas or flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under 40 CFR 63.670(i), along with the date and start and end time for the 15-minute block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, retain records of the 15-minute block average temperature, pressure and molecular weight of the flare vent gas, enclosed combustion device vent gas, or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years.
- (v) The flare vent gas or enclosed combustion device vent gas compositions specified to be monitored under 40 CFR 63.670(j). Retain records of individual component concentrations from each compositional analyses for a minimum of 2 years. If an NHV_{vg} analyzer is used, retain records of the 15-minute block average values for a minimum of 5 years, as well as records of quality assurance activities conducted on the analyzer and any cylinder gas certificates. If you demonstrate your gas streams have consistent composition using the provisions in 40 CFR 63.670(j)(6), retain records of the current application for which you are using for as long as you use the fixed NHV_{vg} as determined using the provisions in 40 CFR 63.670(j)(6).
- (vi) Each 15-minute block average operating parameter calculated following the methods specified in 40 CFR 63.670(k) through (n), as applicable.
- (vii) All periods during which you did not perform monitoring according to the procedures in 40 CFR 63.670(g), (i), and (j) as applicable. Note the start date, start time, and duration in minutes for each period.
- (viii) If you conduct a one-time flare tip velocity operating limit compliance assessment according to § 60.113c(c)(1)(iv)(C), a copy of the assessment, including all calculations for as long as you use this compliance method.
- (ix) For each parameter monitored using a CMS, retain the records specified in paragraphs (d)(5)(ix)(A) through (C) of this section, as applicable:
 - (A) For each deviation, record the start date and time, duration, cause, and corrective action taken.

- (B) For each period when there is a CMS outage or the CMS is out of control, record the start date and time, duration, cause, and corrective action taken.
 - (C) Each inspection or calibration of the CMS including a unique identifier, make, and model number of the CMS, and date of calibration check.
 - (x) For an enclosed combustion device for which you elected to comply with § 60.112c(d)(5), you must also keep a copy of each performance test.
- (e) If you are required to meet the degassing requirements in § 60.112c(a)(3), you must maintain records necessary to demonstrate compliance with the requirements in § 60.112c(e) including, if appropriate, records of existing standard site procedures used to empty and degas (deinventory) equipment for safety purposes.

§ 60.116c Reporting requirements.

- (a) **Initial notification requirements.** You must submit initial notifications to the Administrator within 60 days after October 15, 2024 or within 60 days after becoming an affected storage vessel, whichever is later. Once the report template for this subpart has been available on the Compliance and Emissions Data Reporting Interface (CEDRI) website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for 1 year, you must submit all subsequent initial notifications using the appropriate electronic report template on the CEDRI website for this subpart and following the procedure specified in paragraph (f) of this section. The date report templates become available will be listed on the CEDRI website. For each storage vessel affected facility subject to the standards in § 60.112c, include the following information in the initial notification:
 - (1) The following general facility information:
 - (i) Facility name;
 - (ii) Facility physical address, including city, county, State, and zip code;
 - (iii) Latitude and longitude of facility's physical location. Coordinates must be in decimal degrees with at least five decimal places; and
 - (iv) The following information for the facility contact person:
 - (A) Name;
 - (B) Mailing address, including city, county, State, and zip code;
 - (C) Telephone number; and
 - (D) Email address.
 - (2) Identification of the storage vessel(s) subject to this subpart.
 - (3) Capacity (in gallons) of each storage vessel.
 - (4) Maximum true vapor pressure of the liquid stored (in psia) in each storage vessel.
 - (5) Indication of the standards for which the storage vessel complies [§§ 60.112c(b); 60.112c(c); 60.112c(d); 60.112c(e)].

- (6) If you route emissions to a control device, specify the design of the storage vessel and closed vent system (*i.e.*, storage vessel designed according to § 60.112c(d)(1)(i); or closed vent system designed according to § 60.112c(d)(1)(ii)), the type of control device (*i.e.*, enclosed combustion device complying with temperature operating limit; enclosed combustion device electing to comply with § 60.112c(d)(5); process heater or boiler; catalytic incinerator; flare, or other control device (specify)).
 - (7) If you route emissions to a process, submit the information specified in § 60.112c(d)(6)(ii) and (iii).
 - (8) If you route emissions to a fuel gas system, as specified in § 60.112c(d)(6)(iv), submit a statement that the emission stream is connected to the fuel gas system.
- (b) **Other notifications.** Submit notifications for filling and refilling an affected storage vessel and for conducting gap measurements as specified in paragraphs (b)(1) and (2) of this section.
- (1) As specified in § 60.113c(a)(4) and (b)(7)(ii), you must notify the Administrator at least 30 days prior to inspection of each storage vessel for which an inspection is required by § 60.113c(a)(1), (a)(2)(ii) or (b)(7) to afford the Administrator the opportunity to have an observer present. Submit the notification using CEDRI as specified in paragraph (f) of this section. If the inspection required by § 60.113c(a)(2)(ii) or (b)(7) is not planned and you could not have known about the inspection 30 days in advance of refilling the storage vessel, you must notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation using CEDRI demonstrating why the inspection was unplanned.
 - (2) As specified in § 60.113c(b)(6), you must notify the Administrator 30 days in advance of any gap measurements required by § 60.113c(b)(1) to afford the Administrator the opportunity to have an observer present. Submit the notification using CEDRI as specified in paragraph (f) of this section. If the inspection required by § 60.113c(b)(1) is not planned and you could not have known about the inspection 30 days in advance of the gap measurement, you must notify the Administrator at least 7 days prior to the conducting the gap measurement. Notification must be made by telephone immediately followed by written documentation using CEDRI demonstrating why the gap measurement was unplanned.
- (c) **Reporting requirements for semiannual report.** You must submit to the Administrator semiannual reports with the applicable information in paragraphs (c)(1) through (12) of this section by the dates specified in paragraph (d) of this section. For this subpart, the semiannual reports supersede the excess emissions and monitoring systems performance report and/or summary report form required under § 60.7. Once the report template for this subpart has been available on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for 1 year, you must submit all subsequent reports using the appropriate electronic report template on the CEDRI website for this subpart and following the procedure specified in paragraph (f) of this section. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated State agency or other authority has approved a different schedule for submission of reports, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.
- (1) Report the following general facility information:
 - (i) Facility name;
 - (ii) Facility physical address, including city, county, and State;

- (iii) Latitude and longitude of facility's physical location. Coordinates must be in decimal degrees with at least five decimal places;
 - (iv) The following information for the facility contact person:
 - (A) Name;
 - (B) Mailing address;
 - (C) Telephone number; and
 - (D) Email address.
 - (v) Date of report and beginning and ending dates of the reporting period. You are no longer required to provide the date of report when the report is submitted via CEDRI; and
 - (vi) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. If your report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces the requirement in this paragraph (c)(1)(vi).
- (2) For storage vessels complying with the provisions of § 60.112c(b) or (c):
- (i) Identification of the storage vessel and an indication of whether you comply with § 60.112c(b) or (c).
 - (ii) An indication whether the storage vessel was inspected during the reporting period, and if so, the date and type of each inspection conducted during the reporting period [the type of inspection shall be selected from the following list: initial IFR inspection according to § 60.113c(a)(1), IFR visual inspection from fixed roof according to § 60.113c(a)(2)(i), combined IFR visual inspection with LEL monitoring according to § 60.113c(a)(2)(i) and (3), internal IFR inspection according to § 60.113c(a)(2)(ii), IFR LEL monitoring according to § 60.113c(a)(3), EFR gap measurements according to § 60.113c(b)(1) through (4), or visual EFR inspection according to § 60.113c(b)(7)].
 - (iii) For storage vessels complying with the provisions of § 60.112c(b) that were not inspected according to § 60.113c(a)(2)(ii) during the reporting period, report the last date the storage vessel was inspected according to the provisions in § 60.113c(a)(2)(ii).
- (3) For each failure of a visual inspection required under § 60.113c(a)(2)(i), report the information in paragraphs (c)(3)(i) through (iii) of this section. For each failure of LEL monitoring required under § 60.113c(a)(3), report the information in paragraphs (c)(3)(i) through (iv) of this section.
- (i) Identification of the storage vessel;
 - (ii) The date of the inspection;
 - (iii) The nature of the defects; and
 - (iv) The following information regarding the LEL monitoring conducted:
 - (A) Date and start and end times of the LEL monitoring conducted.
 - (B) Wind speed in miles per hour at the top of the storage vessel on the date of LEL monitoring.
 - (C) The highest 5-minute rolling average reading during the monitoring event.

- (D) If re-monitoring was required due to excessive wind or repair during the visual inspection, report the information in paragraphs (b)(3)(iv)(A) through (C) of this section for the re-monitoring event.
 - (E) Whether the floating roof was repaired, replaced, or taken out of VOL service. If the storage vessel was taken out of VOL service, report the date the storage vessel was emptied. If the floating roof was replaced or repaired, report the nature of and date the repair was made and the information in paragraphs (b)(3)(iv)(A) through (C) of this section for each re-monitoring conducted to confirm the repair.
- (4) For each inspection required by § 60.113c(a)(2)(ii) that finds holes or tears in the seal or seal fabric, defects in the internal floating roof, or other control equipment defects listed in § 60.113c(a)(2)(ii), report:
- (i) Identification of the storage vessel and date of inspection;
 - (ii) The reason it did not meet the specifications of § 60.112c(b) or § 60.113c(a)(2)(ii);
 - (iii) A description of each repair made; and
 - (iv) Date of repair.
- (5) For each inspection required under § 60.113c(b)(1), report the following information:
- (i) Identification of the storage vessel and the date of the inspection;
 - (ii) The accumulated area of gaps between the storage vessel wall and the primary seal (in square inches per foot of storage vessel diameter);
 - (iii) The maximum width of any portion of any gap in the primary seal (in inches);
 - (iv) The accumulated area of gaps between the storage vessel wall and the secondary seal (in square inches per foot of storage vessel diameter);
 - (v) The maximum width of any portion of any gap in the secondary seal (in inches); and
 - (vi) An indication whether there was an inspection failure. If there was an inspection failure, also include the following information in the report:
 - (A) An indication of the type of deviation(s) [indicating all that apply from: §§ 60.113c(b)(4)(i)(A), 60.113c(b)(4)(i)(B), 60.113c(b)(4)(i)(C), 60.113c(b)(4)(i)(D), 60.113c(b)(4)(ii)(A), 60.113c(b)(4)(ii)(B), 60.113c(b)(4)(ii)(C), 60.113c(b)(4)(ii)(D), 60.113c(b)(4)(iii)(A), 60.113c(b)(4)(iii)(B), 60.113c(b)(4)(iii)(C), 60.113c(b)(4)(iii)(D)]; and
 - (B) The date the storage vessel was emptied or the repairs made and date of repair.
- (6) For each inspection required by § 60.113c(b)(7) that finds defects as listed in § 60.113c(b)(7)(i), report:
- (i) Identification of the storage vessel and date of inspection;
 - (ii) The reason it did not meet the specifications of § 60.112c(c) or § 60.113c(b)(7);
 - (iii) A description of each repair made; and
 - (iv) Date of repair.

- (7) For each landing of an internal floating roof or an external floating roof that triggers an alarm required by § 60.113c(a)(5) or (b)(8), report:
 - (i) Identification of the storage vessel;
 - (ii) Date the roof was landed; and
 - (iii) Indication of whether the roof landed because the storage vessel was being emptied.
- (8) After installing a closed vent system that routes to a control device, fuel gas system, or process to comply with § 60.112c, report the following, as well as the information in paragraphs (c)(9) or (10) of this section, as applicable:
 - (i) Results of annual inspections that indicate a backpressure regulator valve is not set correctly or does not fully close when not in the open position. Include the date and time of the inspection, the type of deviation, the corrective action taken, and the date and time when the backpressure regulator valve is set correctly, repaired, or replaced.
 - (ii) For each inspection conducted under § 60.113c(c)(2), identification of the closed vent system, the date of inspection, the type of inspection (Method 21 of appendix A-7 to this part or visible, audible, and olfactory methods) and summary result of the inspection (no leaks detected or leaks were detected). For each leak detected, provide an identification of the part of the closed vent system associated with the leak, the date of the first attempt at repair, and the date of successful repair or anticipated repair if the repair is delayed.
 - (iii) The start date and time, duration in hours, and an estimate of the mass quantity in pounds of VOL released for times when flow is detected or emissions are diverted from the control device through a bypass line while a storage vessel affected facility vented to the closed vent system contains VOL or is being degassed.
- (9) After installing a closed vent system and control device to comply with § 60.112c other than a flare or an enclosed combustion device electing to comply with § 60.112c(d)(5), report:
 - (i) For each instance when the CMS measured 3-hour rolling averages below the established operating limit:
 - (A) The date and start time of the deviation;
 - (B) The duration of the deviation in hours;
 - (C) The lowest 3-hour rolling average operating parameter reading during the period of the deviation;
 - (D) A unique identifier for the CMS;
 - (E) The make, model number, and date of last calibration check of the CMS; and
 - (F) The cause of the deviation and the corrective action taken.
 - (ii) For all instances when the CMS was inoperative:
 - (A) The date and start time of the deviation;
 - (B) The duration of the deviation in hours;
 - (C) A unique identifier for the CMS;

- (D) The make, model number, and date of last calibration check of the CMS; and
 - (E) The cause of the deviation and the corrective action taken.
- (10) After installing a closed vent system and a flare to comply with § 60.112c or an enclosed combustion device electing to comply with § 60.112c(d)(5), report:
- (i) The date and start and end times for each of the following instances:
 - (A) Each 15-minute block during which there was at least 1 minute when storage vessel vapors were routed to the flare and no pilot flame or flare flame was present.
 - (B) Each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes. Additionally, report the number of minutes for which visible emissions were observed during the observation or an estimate of the cumulative number of minutes in the 2-hour period for which emissions were visible based on best information available to the owner or operator.
 - (C) Each 15-minute period for which the applicable operating limits specified in 40 CFR 63.670(d) through (f) were not met. You must identify the specific operating limit that was not met and report the value of the net heating value operating parameter(s) during the deviation determined following the methods in 40 CFR 63.670(k) through (n) as applicable.
 - (ii) The start date, start time, and duration in minutes for each period when storage vessel vapors were routed to the flare or enclosed combustion device and the applicable monitoring was not performed.
 - (iii) For each instance reported under paragraphs (c)(10)(i) and (ii) of this section that involves CMS, report the following information:
 - (A) A unique identifier for the CMS;
 - (B) The make, model number, and date of last calibration check of the CMS; and
 - (C) The cause of the deviation or downtime and the corrective action taken.
- (11) For pressure relief devices on a storage vessel or closed vent system subject to § 60.112c(d)(1)(iii) or (d)(2)(iii), report each pressure release to the atmosphere, including pressure relief device identification name or number, the start date, start time, and duration (in minutes) of the pressure release; and an estimate of the mass quantity in pounds of VOL released.
- (12) For vacuum breaking devices on a storage vessel subject to § 60.112c(d) and (d)(1)(iii), report the following information for each time the vacuum breaking device failed to close prior to the storage vessel reaching atmospheric pressure: identification name or number of vacuum breaking device; the start date, start time, and duration (in minutes) of the pressure release; and an estimate of the mass quantity in pounds of VOL released.
- (d) ***Timeframe for semiannual report submissions.***
- (1) The first semiannual report will cover the period starting with the date the source first becomes an affected facility subject to this subpart and ending June 30 or December 31, whichever date is earlier. For example, if the source becomes an affected facility on April 15, the first semiannual

report would cover the period from April 15 to June 30. The first semiannual report must be submitted on or before the last day of the month 2 months after the last date covered by the semiannual report. In this example, the first semiannual report would be due August 31.

- (2) Subsequent semiannual reports will cover subsequent 6 calendar month periods (January 1 through June 30 or July 1 through December 31, as applicable) with each report due on or before the last day of the month 2 months after the last date covered by the semiannual report (August 31 or February 28 or 29, as applicable).
- (3) For each affected facility that is subject to permitting regulations pursuant to 40 CFR parts 70 or 71, if the delegated authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent semiannual reports according to the dates the delegated authority has established instead of the dates in paragraphs (d)(1) and (2) of this section.

(e) **Reporting requirements for performance tests.** Within 60 days after the date of completing each performance test, you must submit the results following the procedures specified in paragraph (f) of this section. Data collected using test methods that are supported by the U.S. Environmental Protection Agency (EPA) Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or an alternate electronic file.

(f) **Requirements for electronically submitting reports.** If you are required to submit notifications or reports following the procedures specified in this paragraph (f), you must submit notifications or reports to the EPA via CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as confidential business information (CBI). Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report, you must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in paragraphs (f)(1) and (2) of this section. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data are not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph (f).

- (1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings. ERT files should be flagged to the attention of the Measurement Policy Group Leader and all other files should be flagged to the attention of the

NSPS Kc Rule Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.

- (2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: U.S. EPA, Attn: OAQPS Document Control Officer, Mail Drop: C404-02, 109 T.W. Alexander Drive, P.O. Box 12055, RTP, NC 27711. ERT files should be sent to the secondary attention of the Measurement Policy Group Leader and all other files should be sent to the secondary attention of the NSPS Kc Rule Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(g) **Claims of EPA system outage.** If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with that reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (g)(1) through (7) of this section.

- (1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.
- (2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.
- (3) The outage may be planned or unplanned.
- (4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.
- (5) You must provide to the Administrator a written description identifying:
 - (i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
 - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
 - (iii) A description of measures taken or to be taken to minimize the delay in reporting; and
 - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- (7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(h) **Claims of force majeure.** If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with that reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (h)(1) through (5) of this section.

- (1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility,

its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

- (2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.
- (3) You must provide to the Administrator:
 - (i) A written description of the force majeure event;
 - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
 - (iii) A description of measures taken or to be taken to minimize the delay in reporting; and
 - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- (5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

§ 60.117c Delegation of authority.

- (a) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.
- (b) Authorities which will not be delegated to State, local, or Tribal agencies: §§ 60.113c(d)(1)(iv) and 60.114c and approval of an alternative to any electronic reporting to the EPA required by this subpart.