

Kansas Administrative Regulations

Department of Health and Environment

Article 19.—Ambient Air Quality Standards and Air Pollution Control

28-19-325. Compressed air energy storage.

(a) The terms "compressed air energy storage" and "CAES," as used in this regulation, shall mean the compression and storage of air that is released and converted to energy for the production of electricity.

(b) Each person who proposes to construct, modify, or operate a CAES facility with a potential-to-emit that equals or exceeds the emissions thresholds, emissions limitations, or standards specified in K.A.R. 28-19-300 shall comply with the following upon application for a construction permit or approval:

(1) All applicable provisions of the Kansas air quality act and the Kansas air quality regulations as directed by the secretary; and

(2) for underground CAES facilities, any applicable regulations adopted by the Kansas corporation commission pursuant to K.S.A. 66-1274, and amendments thereto.

(c) Each person who proposes to construct or modify a CAES facility that includes underground storage and does not include energy production utilizing combustion shall meet the following requirements:

(1) Upon application for a construction permit or approval, the person shall comply with any applicable regulations adopted by the Kansas corporation commission pursuant to K.S.A. 66-1274, and amendments thereto.

(2) The person shall develop and submit to the department for approval, with the application for a construction permit or approval, a site emissions characterization plan that determines the types and quantities of any regulated pollutants that reasonably could be present. The site emissions characterization plan shall include the following:

(A) A list of volatile organic compounds and hazardous air pollutants, as defined in K.A.R. 28-19-201, that are or reasonably could be present in the proposed storage formation within the facility and that could be emitted as a result of the facility's operations;

(B) the spatial characteristics of the proposed storage formation, including existing and proposed injection and withdrawal wells;

(C) a site characterization sampling plan that includes plans, either maps or diagrams, and a rationale for the following:

(i) Proposed sample types;

(ii) sampling locations;

(iii) number of samples; and

(iv) test methodologies;

(D) a quality assurance plan;

(E) the use of a laboratory approved by the secretary;

(F) any additional information that may be required by the department to fully characterize the site's emissions;

(G) a schedule that includes a timeline for implementing the requirements prescribed in paragraph (c)(2); and

(H) existing information or knowledge about the proposed site or an adjacent site, as approved by the secretary, to complete, supplement, or take the place of any or all elements of the site emissions characterization plan prescribed in paragraph (c)(2).

(3)(A) If the site emissions characterization plan results indicate that emissions equal or exceed the emissions thresholds, emissions limitations, or standards specified in K.A.R. 28-19-300, the person proposing to construct or modify the CAES facility shall be subject to the applicable provisions of K.A.R. 28-19-300 through 28-19-350 for obtaining a construction permit or approval before commencing construction.

(B) If the person decides to proceed with the proposed CAES facility, the person shall submit the site emissions characterization plan results with an application for a construction permit or approval to the department.

(d)(1) The owner or operator of each CAES facility operating pursuant to a permit or approval issued by the department shall conduct emissions testing once every four calendar quarters in accordance with a sampling plan approved by the secretary. A certified copy of the test results signed by the person conducting the tests shall be provided to the department not later than 60 days after the end of the calendar quarter in which the emissions testing was conducted.

(2) The owner or operator may be required by the secretary to increase test frequency if emissions test results are close to or exceed an emissions limitation or an emissions threshold specified in a permit or approval issued by the secretary to the CAES facility.

(3) Upon written request by the owner or operator, decreased or suspended emissions testing may be approved by the secretary if the source demonstrates emissions test results significantly below emissions limitations or emissions thresholds specified in a permit or approval for three consecutive years.

(e)(1) The owner or operator of each CAES facility operating pursuant to a permit or approval issued by the department shall inspect the aboveground components of each CAES well and storage facility for liquid and vapor leaks at least once each calendar quarter. The owner or operator shall visually inspect for liquid leaks and shall test for vapor leaks using test methods consistent with USEPA method 21 in 40 C.F.R. part 60, appendix A, as adopted by reference in K.A.R. 28-19-720, or an alternate method as demonstrated to the satisfaction of the secretary to be equivalent. Leak detection points to be inspected and tested shall include the following:

- (A) Valves;
- (B) flanges and other connections;
- (C) pumps and compressors;
- (D) pressure-relief devices;
- (E) process drains;
- (F) open-ended lines or valves;
- (G) seal system degassing vents and accumulator vents; and
- (H) access door seals.

(2) The owner or operator shall record the following information and keep the information available at the CAES facility for at least five years for department inspection or for submittal upon request by the department, which may include submittal with the emissions test results specified in subsection (d):

- (A) The total number and the locations of the leak detection points;
- (B) the date of each inspection;

(C) the number of leak detection points inspected and the number of leaks detected for each inspection date;

(D) the location of leaks detected for each inspection date; and

(E) the date and type of each corrective action taken.

(Authorized by K.S.A. 2009 Supp. 65-3005 and 66-1275; implementing K.S.A. 2009 Supp. 65-3005, K.S.A. 65-3007, 65-3008, 65-3010, and K.S.A. 2009 Supp. 66-1275; effective Nov. 29, 2010.)

***** Authenticated Kansas Administrative Regulation *****