Kansas Administrative Regulations

Department of Health and Environment

Article 19.—Ambient Air Quality Standards and Air Pollution Control—Volatile Organic Compound Emissions.

28-19-77. Chemical processing facilities that operate alcohol plants or liquid detergent plants.

(a) The provisions of this regulation shall apply to any facility that:

(1) Uses, produces, or stores ethanol or methanol;

(2) has a volatile organic compound (VOC) potential contaminant emission rate of 100 tons per year or greater;

(3) is located in an area which has been identified as not meeting the national primary ambient air quality standard for ozone in the manner prescribed by the provisions of the federal clean air act, 42 U.S.C. 7407 as promulgated at 40 CFR Part 81, as in effect July 1, 1989.

(b) For purposes of this regulation, the potential contaminant emission rate shall be determined as the sum of all potential VOC emissions from point and fugitive sources, including any VOC's present in the wastewater stream, 100 percent of which are presumed to be emitted to the atmosphere.

(c) VOC emission sources are:

(1) Point sources, which include process tanks, alcohol storage tanks, wastewater vents, and wastewater VOC removal devices; and

(2) fugitive sources, which include all sources of VOC emissions other than point sources, including leaking valves, compressors, pumps, gauges, open-ended lines, sample flanges, and other sources of fugitive emissions including alcohol loading and unloading operations.

(d) The owner or operator of an affected facility shall control VOC emissions from process tanks and alcohol storage tanks by installing and operating the following, singly or in combination:

(1) Retrofitting the tanks with an internal or external floating roof. Internal and external floating roof tanks shall be designed and constructed to meet or exceed the design specifications found at 40 CFR Part 60, Subpart Kb, as in effect July 1, 1989; or

(2) retrofitting the tanks with a vapor collection system and control device to reduce VOC emissions by 95 percent, by weight or greater. Vapor collection systems and control devices installed pursuant to this regulation shall be operated at all times when emissions may be vented to them.

(e) The owner or operator of an affected facility shall reduce the VOC concentration in process wastewater by 90 percent by weight or greater, less any credit for VOC reductions achieved through pollution prevention, by:

(1) installing a wastewater VOC recovery device or devices to remove and capture VOC's contained in process wastewater streams for recovery or destruction using a control device pursuant to subsection (f); or

(2) taking credit for preventing VOC's from entering the wastewater stream through pollution prevention actions such as equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

(f) The owner or operator of an affected facility shall control VOC emissions from wastewater point sources by installing and operating a device or devices to collect and recover or destroy VOC's from wastewater point sources to reduce VOC emissions by 95 percent, by weight, or greater. For treatment purposes, emissions from wastewater point sources may be combined, in a common vapor collection system or systems, with emissions collected from process tanks and alcohol storage tanks to achieve 95 percent reduction of VOC's by weight, or greater.

(g) The owner or operator of an affected facility shall minimize VOC emissions from fugitive sources by developing a fugitive source emission control plan which shall be submitted to the department within 12 months after the effective date of this regulation or upon commencing operation of the affected facility, whichever is later.

(1) The plan shall include a description of the control strategy and a testing program to evaluate the percent reduction of VOC emissions.

(2) The approved control strategy and testing program shall be implemented and the results of testing submitted to the department within six months of the department's approval of the plan.

(3) The fugitive source emission control plan shall be designed to achieve at least 50 percent control efficiency.

(h) During compliance demonstrations under subsections (d), (e), or (f):

(1) The averaging time for percent reduction requirements for gaseous VOC streams shall be the duration of the 40 CFR Part 60, Appendix A, reference method 25, performance test, as in effect July 1, 1989. Control equipment parameters, measured by continuous monitoring devices, shall indicate whether control equipment is properly operated and maintained; and

(2) the averaging time for percent reduction requirements for process wastewater streams shall be daily, confirmed by at least one daily sample of the process wastewater stream at both the inlet and outlet of the control device.

(i) No later than eighteen months after the effective date of this regulation or within 180 days of completion of control equipment installation, whichever date occurs first, the owner or operator of an affected facility shall conduct performance tests to demonstrate compliance with the applicable VOC control requirements found in subsections (d), (e), (f) and (g). If the performance test will not be conducted within 12 months after an existing facility becomes subject to this regulation, a final control plan shall be submitted to the secretary by December 31, 1991 for approval. This plan shall include the following:

(1) a detailed plan for process modifications; and

(2) a time schedule for compliance containing increments of progress and a final compliance date.

(j) The owner or operator of an affected facility shall conduct performance tests to demonstrate compliance with the applicable percent reduction requirements found in subsections (d) and (f) in accordance with 40 CFR Part 60, Appendix A, reference method 25 or reference method 25A, as in effect July 1, 1989, and other applicable approved EPA reference methods for gaseous streams and demonstrate compliance with the applicable percent reduction requirement found in subsection (e) by methods

approved by the department for process wastewater streams. All monitoring equipment shall be installed and calibrated prior to commencement of performance tests.

(k) The owner or operator of an affected facility shall conduct an initial performance evaluation for all tanks retrofitted with an internal or external floating roof in accordance with the testing requirements found at 40 CFR 60.113b, as in effect on July 1, 1989.

(l) The owner or operator of an affected facility which addresses VOC reduction:

(1) By means of a thermal incinerator shall install, operate, maintain and calibrate a monitoring device to continuously measure and record the temperature in the firebox, accurate to within ± 1.0 percent of the temperature being measured or ± 2.5 degrees Celsius, whichever is greater;

(2) by means of a catalytic incinerator shall install, operate, maintain and calibrate a monitoring device to continuously measure and record the exhaust gas temperature immediately before and after the catalyst bed, accurate to within ± 1.0 percent of the temperature being measured or ± 2.5 degrees Celsius, whichever is greater;

(3) by means of an absorber shall install, operate, maintain and calibrate a monitoring device to continuously measure and record the scrubbing liquid temperature and specific gravity (or other parameter approved by the department to measure absorbing liquid saturation);

(4) by means of a condenser shall install, operate, maintain and calibrate a monitoring device to continuously measure and record the product side temperature, accurate to within ± 1.0 percent of the temperature being measured or ± 0.5 degrees Celsius, whichever is greater;

(5) by means of a carbon adsorption unit shall install, operate, maintain and calibrate a monitoring device to continuously measure and record the carbon bed temperature and integrated stream flow;

(6) by means of retrofitting any tank with an internal or external floating roof shall implement a visual inspection and repair program consistent with 40 CFR 60.113b;

(7) of process wastewater shall, at least once daily, collect water samples simultaneously, at the inlet and outlet of the control device, and determine the VOC concentration in the samples. Percent reduction shall be determined as the difference between the inlet and outlet concentration divided by the inlet concentration; and

(8) by any means, including those specified in this subsection, shall measure any parameters and implement any programs which the department has notified the affected facility are necessary to verify proper operation of the emission control equipment.

(m) For the purpose of subsection (l), any monitoring required to be conducted continuously shall, at the minimum, require the monitoring system to measure the required parameter at 15 minute intervals and record the average of the measurements at least once per hour, with at least one hourly average recorded for each hour the process is operated.

(1) Monitoring equipment shall be operated during all periods, except when the VOC-generating process is completely shut down and the VOC concentration to the control device is zero.

(2) All monitoring equipment shall be installed and operated in accordance with the manufacturer's written specifications.

(n) The owner or operator of an affected facility shall maintain the following records, in a form suitable for inspection, for a minimum of two years from the date of generation:

(1) all measurements, including continuous monitoring system, monitoring device, and performance testing measurements;

(2) all continuous emission monitoring system performance evaluations;

(3) all continuous emission monitoring or monitoring device calibration checks, and adjustments and maintenance performed on these systems or devices; and

(4) any other information considered necessary by the department to verify proper operation and maintenance of emission control equipment.

(o) The owner or operator of an affected facility shall comply with the following reporting requirements:

(1) The owner or operator of any existing facility shall notify the department of the date installation of control equipment is completed. The notification shall be postmarked no later than 15 days after completion of installation.

(2) The owner or operator shall notify the department of the anticipated test dates at least 30 days, but not more than 60 days, prior to commencement of the compliance demonstration tests.

(3) The owner or operator shall submit a copy of all performance test results within 30 days of completion of any tests. Test results shall include a summary of all monitored control equipment parameters measured during the performance evaluation.

(Authorized by K.S.A. 65-3006; implementing K.S.A. 65-3010; effective Oct. 7, 1991.)

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