

REGULATION 6.32 Standard of Performance for Leaks from Existing Petroleum Refinery Equipment

Air Pollution Control District of Jefferson County Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control

Pursuant To: KRS Chapter 77 Air Pollution Control

Necessity And Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of leakage from equipment at existing petroleum refineries.

SECTION 1 Applicability

This regulation applies to each affected facility commenced before May 20, 1981.

SECTION 2 Definitions

Terms used in this regulation not defined herein shall have the meaning given to them in Regulation 1.02.

- 2.1 "Affected facility" means each individual component within a petroleum refinery complex that could potentially leak volatile organic compounds to the atmosphere.
- 2.2 "Component" means equipment or apparatus which includes, but is not limited to, pump seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open-ended pipes that could potentially leak VOCs to the atmosphere.
- 2.3 "Gas service" means equipment that processes, transfers, or contains a VOC or mixture of VOCs in the gaseous phase.
- 2.4 "Leak" means the presence of a VOC concentration exceeding 10,000 ppm when tested in the manner in Section 5.
- 2.5 "Liquid service" means equipment that processes, transfers, or contains a VOC or VOC mixture in the liquid phase.
- 2.6 "Petroleum refinery complex" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through re-distillation, cracking, rearrangement or reforming of unfinished petroleum derivatives.

SECTION 3 Standard for Volatile Organic Compounds

The owner or operator of an affected facility shall:

- 3.1 When any affected facility within the petroleum refinery complex is found to be leaking, repair the leak within 15 days. A component recheck shall be made after repair. If the leak is still present or a new leak is created by the repair, further maintenance shall be performed until the VOC emission drops below the screening value (10,000 ppm).
- 3.2 Any time a valve is located at the end of a pipe or line containing VOCs, seal the end of the line with a second valve, a blind flange, a plug or a cap. This requirement does not apply to safety pressure relief valves.

SECTION 4 Monitoring and Reporting Requirements

The owner or operator shall conduct such monitoring of affected facilities and submit records as specified below:

- 4.1 The refinery operator shall perform component monitoring using the method in Section 5 as follows:
 - 4.1.1 Monitor with a portable volatile organic compound detection device one time per year (annually): pump seals, pipeline valves in liquid service, and process drains.
 - 4.1.2 Monitor with a portable volatile organic compound detection device four times per year (quarterly): compressor seals, pipeline valves in gas service, and pressure relief valves in gas service.
 - 4.1.3 Monitor visually 52 times per year (weekly): pump seals.
 - 4.1.4 No individual monitoring is necessary for pressure relief valves in liquid service and pipeline flanges.
- 4.2 Pipeline valves and pressure relief valves for gas service shall be marked or noted so that their location is readily obvious to both the refinery operator performing the monitoring and the District.
- 4.3 Whenever liquids are observed dripping from a pump seal, the seal shall be checked immediately with a portable detector to determine if a leak of VOCs is present.
- 4.4 Whenever a relief valve operates and venting to the atmosphere occurs, the operator shall monitor such valve immediately. Pressure relief devices which are tied in to either a flare header or vapor recovery device shall be exempted from the monitoring requirements.
- 4.5 When a leak is located, a weatherproof and readily visible tag bearing an identification number and the date the leak is located shall be affixed to the leaking component. The location, tag number, date and stream composition of the leak shall also be noted on a survey log. When the leak is repaired, the date of repair and date and instrument reading of component recheck after maintenance shall be entered in the survey log and the tag discarded. The operator shall retain the survey log for two years after the inspection is completed.
- 4.6 After quarterly monitoring has been performed, the refinery operator shall submit a report to the District listing all leaks that were located but not repaired within the 15 day limit and a signed statement attesting to the fact that all monitoring has been performed as stipulated in the control plan. Leaks that cannot be repaired within 15 days shall be repaired during the next scheduled turn-around, or if unable to be brought into compliance, a deviation shall be requested and obtained on an individual basis.

SECTION 5 Test Methods and Procedures

- 5.1 Except as provided for in Regulation 1.04, the test methods as defined in "Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment" (OAQPS 1.2-111) Appendix B shall be used to determine compliance with the standard in section 3 and monitoring requirements in section 4.
- 5.2 The owner or operator may elect to use alternate monitoring methods if it can be demonstrated to the District's satisfaction that the alternate methods will achieve equivalent control efficiency.

SECTION 6 Deviation and Modification

- 6.1 If, after at least two complete annual checks, the refinery operator determines that modifications of the monitoring requirements are in order, the operator may request in writing to the District that a revision be made. The submittal shall include data that have been developed to justify any modifications in the monitoring schedule.
- 6.2 If the District finds an excessive number of leaks during an inspection, or if the refinery operator found an excessive number of leaks in any given area during scheduled monitoring, the District shall increase the required frequency of operator inspections for that part of the facility.
- 6.3 Deviation with the standards and limitations contained in this regulation, when supported by adequate technical information will be considered by the District on a case-by-case basis to allow for technological or economic circumstances that are unique to a source. An alternative program must be approved by EPA as a revision to the SIP.

Adopted v1/5-20-81; effective 5-20-81; amended v2/4-21-82, v3/4-20-88, v4/5-15-91.