

## **REGULATION 1.07 Excess Emissions During Startups, Shutdowns, and Upset Conditions**

### **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 authorizes the Air Pollution Control Board to adopt and enforce all orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation establishes the notification, reporting, and operational requirements for the owner or operator of a stationary source when excess emissions occur as a result of a startup, shutdown, preventable upset condition, or malfunction.

#### **SECTION 1 Definitions**

Terms used in this regulation that are not defined in this regulation shall have the meaning given to them in Regulation 1.02 *Definitions*.

#### **SECTION 2 Excess Emissions**

- 2.1 The owner or operator of a process or process equipment has a general duty to ensure that the emissions from the process or process equipment are in compliance with all applicable emission standards. This includes starting up and shutting down the process or process equipment in a manner that the emissions are in compliance with all applicable emission standards and, consistent with safe operating procedures, stopping input feed to the process or process equipment and shutting down the process or process equipment if excess emissions would likely result from an upset condition.
- 2.2 Excess emissions from a process or process equipment due to startup, shutdown, or upset condition shall be deemed in violation of the applicable emission standard.
- 2.3 In determining the appropriate enforcement action for excess emissions, the District may consider the following factors:
  - 2.3.1 The duration and frequency of excess emissions during startups, shutdowns, and upset conditions,
  - 2.3.2 Whether the excess emissions could have been prevented through careful planning and design,
  - 2.3.3 Whether the excess emissions are part of a recurring pattern indicative of inadequate design, operation, or maintenance,
  - 2.3.4 Whether the process or process equipment was, at all times, operated in a manner consistent with good practices for minimizing emissions,
  - 2.3.5 For an upset condition, whether the owner or operator, consistent with safe operating procedures, stopped input feed to the process or process equipment and shut down the process or process equipment as soon as possible,
  - 2.3.6 For excess emissions during a startup or shutdown, the extent to which the owner or operator complied with section 3.6,
  - 2.3.7 For excess emissions during an upset condition, the extent to which the owner or operator complied with section 4.4,
  - 2.3.8 For an upset condition, whether the excess emissions were the result of a malfunction. To be deemed a malfunction, the owner or operator of the process or process equipment shall demonstrate, through properly signed, contemporaneous operating logs or other

- relevant evidence, all of the following:
- 2.3.8.1 The excess emissions were the result of an identified sudden and reasonably unforeseeable event beyond the control of the owner or operator, including forces of nature,
  - 2.3.8.2 Corrective action to restore normal operation of the process or process equipment was required,
  - 2.3.8.3 The excess emissions were not caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error, and
  - 2.3.8.4 The process or process equipment was, at the time of the upset condition, being properly operated, and
  - 2.3.9 Whether the excess emissions exceeded a concentration in the ambient air that could reasonably have caused an acute noncancer effect.
- 2.4 Nothing in this regulation shall be construed to restrict the District's discretion to take, at any time, appropriate enforcement action under KRS Chapter 77 if, upon information supplied to the District pursuant to this regulation or otherwise available to the District, the District determines that this action is necessary to protect public health or welfare.
- 2.5 The owner or operator of a process or process equipment for which there are excess emissions shall comply with the following requirements, as applicable:
- 2.5.1 For startups and shutdowns, Section 3, and
  - 2.5.2 For upset conditions, Section 4.
- 2.6 If a notification or report to the District is required pursuant to this regulation to be in writing, then compliance with the deadline shall be established as follows:
- 2.6.1 If the notification or report is sent via mail, then the date and time postmarked by the U.S. Postal Service,
  - 2.6.2 If the notification or report is sent via facsimile, then the date and time received by the District as indicated on the printed copy received by the District,
  - 2.6.3 If the notification or report is sent via electronic mail, then the date and time identified as sent by the electronic mail to the District, and
  - 2.6.4 If the notification or report is hand-delivered to the District's office, then the date and time received by the District as stamped by the District.
- 2.7 The owner or operator of a process or process equipment that is subject to a notification or reporting requirement pursuant to this regulation may request, and the District may, for cause, approve an extension of the deadline for submitting one or more elements of the notification or report. The owner or operator may make this request by telephone, facsimile or electronic mail. If the request is made by telephone, then the owner or operator shall submit, by the end of that day, a confirmation written request by facsimile, electronic mail, or mail.
- 2.8 Notwithstanding a requirement in these regulations for certification of a submitted report, the notifications required by sections 3.1, 3.2, 3.3, 4.1, 4.3, and 4.6 are not required to be certified by a "responsible official" as defined in Regulation 2.16 *Title V Operating Permits* section 1.35. The reports required by sections 3.7, 3.8, 4.5, and 4.7 are required to be certified by a "responsible official."

### **SECTION 3 Startup or Shutdown**

- 3.1 If excess emissions during any planned startup or shutdown are expected to occur, then the owner or operator of the process or process equipment shall notify the District in writing no later than 3 days before the planned startup or shutdown.

- 3.2 If an unplanned startup or shutdown during which excess emissions are expected to occur is necessitated by events, other than an upset condition, that the owner or operator could not reasonably have foreseen 3 days before the startup or shutdown, then the notification shall be given to the District by telephone, facsimile, or electronic mail within 1 hour after the decision to start up or shut down the process or process equipment was made, and, if the notification is given by telephone, in writing as promptly as possible, but no later than 24 hours after that decision was made.
- 3.3 If an unplanned startup or shutdown pursuant to section 3.2 begins outside of the District's regular business hours (8:00 a.m. to 5:00 p.m. on Monday to Friday, not including holidays) and the initial written notification pursuant to section 3.2 was not available to the District during regular business hours, then, in addition to that written notification, the owner or operator of the process or process equipment shall leave a message on the District's main telephone line [(502) 574-6000] containing the information required by sections 3.5.1, 3.5.3, 3.5.4, and 3.5.6, and the name and telephone number of a contact person at the stationary source.
- 3.4 An unplanned startup or shutdown during which excess emissions are expected to occur that is necessitated by an upset condition shall be treated as part of the upset condition pursuant to Section 4.
- 3.5 The written planned or unplanned startup or shutdown initial notification pursuant to section 3.1 or 3.2 shall include the following information:
  - 3.5.1 The name and location of the stationary source,
  - 3.5.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 3.5,
  - 3.5.3 The process or process equipment involved in the startup or shutdown,
  - 3.5.4 The scheduled date and time for the beginning of the startup or shutdown process, the expected duration of the startup or shutdown process, and the expected time period during which excess emissions are expected to occur,
  - 3.5.5 The physical and chemical composition and estimated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant,
  - 3.5.6 The reason for and necessity of the startup or shutdown,
  - 3.5.7 The reason the startup or shutdown could not be accomplished without causing excess emissions, and
  - 3.5.8 An explanation as to how the provisions of section 3.6 will be met.
- 3.6 If excess emissions during a startup or shutdown of a process or process equipment are expected to occur, then the owner or operator of the process or process equipment shall comply with all of the following:
  - 3.6.1 Reasonable, available, and practicable emission reduction measures, including process equipment design, appropriate operating procedures, and pollution prevention measures, shall be used to prevent or minimize excess emissions,
  - 3.6.2 The frequency and duration of operation of the process or process equipment in the startup or shutdown mode shall be minimized as much as necessary to prevent or minimize excess emissions,
  - 3.6.3 A bypass of any related control equipment shall not occur unless necessary to prevent loss of life, personal injury, or severe property damage, and the extent and duration of any bypass shall be reduced as much as necessary to minimize excess emissions, and

- 3.6.4 All emission and parametric monitoring systems for the process or process equipment shall be operated unless technically infeasible.
- 3.7 If a person has notified the District pursuant to section 3.1, 3.2, or 3.3 but no excess emission occurred as the result of the startup or shutdown, then the owner or operator of the process or process equipment shall send a written report to the District that includes the name and telephone number of a contact person at the stationary source and the information required by sections 3.8.1, 3.8.3, and 3.8.4, except indicating that no excess emission occurred. The written report may be sent by mail, facsimile, or electronic mail, and shall be sent no later than 5 working days following the completion of the startup or shutdown.
- 3.8 No later than 5 working days following the completion of a startup or shutdown during which excess emissions occurred, whether or not initial notification of the startup or shutdown pursuant to section 3.1, 3.2, or 3.3 was made to the District, the owner or operator of the process or process equipment shall send a written report to the District that includes the following information:
  - 3.8.1 The name and location of the stationary source,
  - 3.8.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 3.8,
  - 3.8.3 The process or process equipment involved in the startup or shutdown,
  - 3.8.4 The actual date and time of the beginning of the startup or shutdown process, the actual duration of the startup or shutdown process, and the actual time period during which excess emissions occurred,
  - 3.8.5 The physical and chemical composition and calculated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant, including a description of the method used for calculating excess emissions and an identification of the applicable emission standard that was exceeded, and
  - 3.8.6 An explanation as to how each provision of section 3.6 was met.
- 3.9 The District may require the owner or operator of a process or process equipment for which startups or shutdowns have resulted in repeated excess emissions to develop and submit a program to eliminate or minimize excess emissions. If the District determines that a program is appropriate, then the District shall notify the owner or operator in writing, specify the information that is required in the program, and establish a deadline for submittal of the program. Upon District approval, the owner or operator shall implement the approved program and the approved program shall be an enforceable requirement of the applicable District permit for the process and process equipment included in the program.

**SECTION 4 Upset Condition**

- 4.1 If excess emissions from a process or process equipment resulting from an upset condition, or from an unplanned startup or shutdown necessitated by an upset condition, occur or are likely to occur, the owner or operator of the process or process equipment shall, as promptly as possible, but no later than 1 hour following the start of the upset condition, or, if a call to the 911 system was made, then no later than 2 hours following the start of the upset condition, notify the District by telephone, facsimile, or electronic mail.
- 4.2 The initial notification of the upset condition pursuant to section 4.1 shall include the following information:
  - 4.2.1 The name and location of the stationary source,

- 4.2.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 4.2,
- 4.2.3 The process or process equipment involved in the upset condition,
- 4.2.4 The date and time of the beginning of the upset condition, the estimated time before input feed to the process or process equipment will be stopped and the process or process equipment shut down or the process or process equipment is returned to normal operation, whichever is earlier (the excess emissions end), and the estimated time period during which excess emissions are likely to occur,
- 4.2.5 To the extent that it can reasonably be determined under the circumstances, the physical and chemical composition and estimated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant,
- 4.2.6 If known or suspected, the likely cause of the upset condition, and
- 4.2.7 If applicable and known, the reason the processes or process equipment will not be shut down immediately, consistent with safe operating procedures.
- 4.3 If the initial notification pursuant to section 4.1 is required to be made at a time outside of the District's regular business hours (8:00 a.m. to 5:00 p.m. on Monday to Friday, not counting holidays), then, in addition to that initial notification, the owner or operator of the process or process equipment shall leave a message on the District's main telephone line [(502) 574-6000] containing the information required by sections 4.2.1, 4.2.3, 4.2.4, 4.2.6, and 4.2.7, and the name and telephone number of a contact person at the stationary source.
- 4.4 If excess emissions during an upset condition of a process or process equipment occur or are likely to occur, then the owner or operator shall comply with both of the following:
  - 4.4.1 Consider the suitability and appropriateness of each of the following and implement one or more as appropriate and necessary to prevent or minimize excess emissions:
    - 4.4.1.1 Reasonable, available, and practicable emission reduction measures, including process equipment design, appropriate operating procedures, pollution prevention measures, use of off-shift labor and overtime, and, consistent with safe operating procedures, immediately stopping or reducing input feed to the process or process equipment and reducing the operation of or shutting down the process or process equipment, and
    - 4.4.2 Comply with all of the following:
      - 4.4.2.1 The frequency and duration of operation of the process or process equipment in an upset condition mode shall be minimized as much as necessary to prevent or minimize excess emissions,
      - 4.4.2.2 A bypass of any related control equipment shall not occur unless necessary to prevent loss of life, personal injury, or severe property damage, and the extent and duration of any bypass shall be reduced as much as necessary to minimize excess emissions, and
      - 4.4.2.3 All emission and parametric monitoring systems for the process or process equipment shall be operated unless technically infeasible.
- 4.5 If a person has notified the District pursuant to section 4.1 or 4.3 but no excess emission occurred as the result of the upset condition, then the owner or operator of the process or process equipment shall send a written report to the District that includes the name and telephone number of a contact person at the stationary source, the information required by sections 4.6.1, 4.6.3, and 4.6.4, and the statement that no excess emission occurred. The

written report may be sent by mail, facsimile, or electronic mail, and shall be sent no later than 5 working days after the input feed to the process or process equipment is stopped and the process or process equipment is shut down or the process or process equipment is returned to normal operation after the occurrence of an upset condition, whichever is earlier.

4.6 As soon as reasonably possible, but no later than 2 hours after the excess emissions ended, the owner or operator of the process or process equipment shall notify the District by telephone, facsimile, or electronic mail. If this notification is made by telephone, the owner or operator shall provide written notification by facsimile or electronic mail no later than 4 hours after the excess emissions ended. The written notification of the end of the upset condition shall include the following information:

4.6.1 The name and location of the stationary source,

4.6.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 4.6,

4.6.3 The process or process equipment involved in the upset condition,

4.6.4 The date and time that the excess emissions ended, and

4.6.5 If the initial notification to the District pursuant to section 4.6 was made by telephone, then the time that the telephone notification was made.

4.7 No later than 15 calendar days after the excess emissions ended, the owner or operator of the process or process equipment shall send a written report to the District that includes the following information:

4.7.1 The name and location of the stationary source,

4.7.2 The name, address, telephone number, and electronic mail address of the person responsible for providing the information required by section 4.7,

4.7.3 The process or process equipment involved in the upset condition,

4.7.4 Confirmation of the actual date and time that the excess emissions ended,

4.7.5 The physical and chemical composition and calculated quantity and concentration of excess emissions, or equivalent information that relates to compliance with the emissions standard, such as emissions monitoring data or results of an EPA-approved test method, for each air contaminant, including a description of the method used for calculating excess emissions and an identification of the applicable emission standard that was exceeded,

4.7.6 An explanation of how the requirements of section 4.4 were met,

4.7.7 An analysis of the cause of the upset condition and the steps that will be taken to prevent or minimize similar occurrences in the future, and

4.7.8 Any additional information requested by the District.

4.8 Upon written request from the owner or operator of a process or process equipment required to submit a report pursuant to section 4.7 for an extension of the due date to submit the information required by section 4.7.7, the District may extend the due date by up to 45 days from the original due date.

## **SECTION 5 Extended Upset Conditions**

- 5.1 If correcting the excess emissions from a process or process equipment resulting from an upset condition is anticipated to exceed 30 days and the owner or operator does not shut down the process or process equipment, then the owner or operator shall, as soon as known, but no later than 7 days after the beginning of the excess emissions, request, in writing, that the District initiate the process for the adoption of a Board Order to allow continued operation with excess emissions. The request by the owner or operator of the process or process equipment shall include a written program outlining a time schedule and corrective actions to abate the excess emissions. The time schedule may include a period for engineering review and analysis of the cause of the excess emissions and design of modifications to effect compliance with the emission standards. The owner or operator shall, in a timely manner, submit all information requested by the District.
- 5.2 Any resulting Board Order shall include a time schedule and required actions to comply with the emission standards. The Board Order shall neither constitute an affirmative defense for violations caused by excess emissions nor preempt the rights of the EPA or any person to take action under federal, state, or local law.

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