

34.0 MALFUNCTION OF EQUIPMENT

34.1 Purpose

The purpose of this section is to place reasonable limits on the amount of emissions an air contaminant source can emit due to startup, shutdown, or malfunction of said source. These limitations are required to protect public health and welfare, and to maintain ambient air quality standards.

34.2 Reasonable Measures Required

Air contaminant sources must take all reasonable measures to keep emissions to a minimum during startups, shutdowns or malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdowns shall not be considered malfunctions.

34.3 Notice Required when Malfunctions Occurs

When any air contaminant source malfunctions in such a manner as to cause the emission of air contaminants in excess of the applicable emission standards contained in the Knox County Department of Air Quality Management Regulations or any permit issued thereto, or of sufficient duration to cause damage to property or public health, the owner or operator of the air contaminant source shall promptly notify the Knox County Department of Air Quality Management of such malfunction and provide a statement giving all pertinent facts, including the duration of the malfunction. Violations of the visible emission standard (excluding visible emissions caused by hazardous air pollutants as named in Section 35.0 of these regulations) which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Knox County Department of Air Quality Management office. The Director shall be notified when the malfunction has been corrected. In attainment and unclassified areas, if emissions other than from sources designated as significantly impacting a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required. Any malfunction that creates an imminent hazard to health must be reported immediately to the Department and to the State Civil Defense.

34.4 Logs and Reports

- (I) (a) A log of all malfunctions, startups, and shutdowns resulting in emissions excess of standards in KCDAQM Regulations or permit issued thereto must be kept at the facility. This log must include, as a minimum:
 - 1. Stack or emission point involved;
 - 2. Time malfunction, startup, or shutdown began and/or when first noticed;
 - 3. Type of malfunction and/or reason for shutdown;
 - 4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation; and
 - 5. The company employee making entry on the log must sign, date, and indicate the time of each log entry.
 - (b) The information under parts (a)1 and 2 of this section must be entered into the log by the end of the shift during which the malfunction or startup began.
 - (c) All information shall be entered in the log no later than 24 hours after startup or shutdown is complete, or malfunction has ceased or has been corrected.
 - (d) Any later discovered corrections can be added in the log as footnotes with the reason for the change denoted.
- (II) The owner or operator of all sources located in a nonattainment area or having significant impact on air quality in a nonattainment area (for pollutant designated) must submit a report to the Director within 30 days after the end of each calendar quarter listing the times at which malfunctions, startups, and/or shutdowns, which resulted in emissions greater than any applicable emissions limits and the estimated amounts of emissions discharged during such times. This report shall also include total emissions during the quarter and be reported in a format designated by the Director. If these emissions are required to be reported under Section 26.0 or Section 40.0 of these regulations, then the reporting requirements of this paragraph are waived.

34.5 Copies of Log Required

The Director may require the owner or operator of any air contaminant source to submit a copy of the log required under subsection 34.4 to him/her within ten(10) days after the request is received. The Director can require copies of the entire log.

34.6 Report Required upon the issuance of a Notice of Violation

- (I) In the event excess emissions are emitted from any air contaminant source, a notice of violation shall automatically be issued except for visible emission levels included as a routine startup and/or shutdown permit condition which are necessary or unavoidable, or determined to be de minimis under this rule 34.6.
- (II) The owner or operator of the violating air contaminant source shall submit within 20 days after receipt of the notice of violation, the data required in paragraph (III) of this subsection to assist the Director in deciding whether to excuse or validate the violation. If the data required under said paragraph has previously been available to the Director prior to the issuance of the notice of violation no further action is required of the violating source. However if the source desires to submit additional information, then this shall be submitted within the 20 day time period.
- (III) Each report required in paragraph (II) of this subsection shall include, as a minimum:
 - (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
 - (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.
 - (c) The time and duration of the emissions;
 - (d) The nature and cause of such emissions;
 - (e) For malfunctions. The steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
 - (f) The steps taken to limit the excess emissions during the occurrence reported; and
 - (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.
- (IV) Failure to submit the report required in paragraph (III) within the 20 day period specified in paragraph (II) shall preclude the admissibility of the data for

consideration of excusal for malfunctions, and for any air contaminant source not having startup or shutdown levels as a permit condition.

- (V) Where the violations are determined from properly certified and operated continuous emission monitors, no notice of violation(s) will be automatically issued unless the specified de minimis levels are exceeded:

Source Type	De Minimis Pollutant Monitored	De Minimis Level
(a) Fuel Burning Installations that would be subject to Tennessee Division of Air Pollution Control(TDAPC) Regulations Chapter 1200-3-5-.01 or 1200-3-5-.05 and having fuel burning equipment of input capacity greater than 600 x 10 ⁶ BTU/hr	Opacity	Two percent of the time during calendar quarter (excluding periods of permitted startup or shutdown and excused malfunctions) so long as no more than one 24 –hour exceedance per calendar year takes place.
	Sulfur Dioxide	One 24-hour exceedance per calendar year.
(b) Fuel burning installations that would be subject to TDAPC Regulations 1200-3-5-.05, 1200-3-5-.10, or 1200-3-6-.05	Opacity	One percent of the time during calendar quarter (excluding periods of permitted startup or shutdown and excused malfunctions) so long as no more than one 24 –hour exceedance per calendar year takes place.
(c) Fuel burning installations that would be subject to TDAPC Regulations 1200-3-16-.02, or 1200-3-16-.59	Opacity	One percent of the time during calendar quarter (excluding periods of permitted startup or shutdown and excused malfunctions) so long as no more than one 24 –hour exceedance per calendar year takes place.
	Sulfur Dioxide	One 3-hour exceedance per year and/or one 24-hour exceedance per year (applicable to sources having three hour standard only)
(d) Kraft Recovery Furnaces that would be subject to either TDAPC Regulations 1200-3-5-.09 or 1200-3-16-.29	Opacity	Six percent of the time (excluding periods of permitted startup or shutdown and excused malfunctions) so long as no more than one 24-hour exceedance per calendar year.
(e) Kraft Recovery Furnaces that would be subject to either TDAPC Regulations 1200-3-7-.07 or 1200-3-16-.29	Total Reduced Sulfur	One percent of the time during calendar quarter (excluding periods of permitted startup or shutdown and excused malfunctions).
(f) Lime Kilns that would be subject to TDAPC Regulations 1200-3-7-.07(4)	Total reduced Sulfur	Two percent of the time during calendar quarter (excluding periods of permitted startup or shutdown and excused malfunctions).
(g) Sulfuric Acid Plants that would be subject to TDAPC Regulations 1200-3-16-.06 and Liquid Sulfur Dioxide Plants that would be subject to TDAPC 1200-3-19-.19.	Sulfur Dioxide	One exceedance greater than 3 hours duration per year (excluding periods of excused malfunctions).
(h)Primary Zinc Smelters that would be subject to TDAPC Regulations 1200-3-16-.24	Sulfur Dioxide	One exceedance of greater than 3 hours duration but less than 24 hour duration per calendar year and/or one 24-hour exceedance per year (excluding periods of startup, shutdown or excused malfunction).
(i) Electric Arc Furnaces that would be subject to TDAPC Regulations 1200-3-16-.26	Opacity	One percent of the time during calendar quarter (excluding periods of permitted startup or shutdown and excused malfunctions) so long as no more than one 24 –hour exceedance per calendar year takes place.
(j) Sulfur Dioxide Abatement System Serving Facilities Producing Organophosphate Compounds.	Sulfur Dioxide	One exceedance greater than 3 hours duration per year (excluding periods of excused malfunctions).
(k) Secondary Lead Furnaces that would be subject to TDAPCRegulations 1200-3-16-.12	Opacity	One half of a percent of the time during a calendar quarter (excluding periods of startup, shutdown, or excused malfunctions).
Any source type utilizing a thirty day rolling average.	Nitrogen Oxides	None (excluding periods of startup, shutdown, or excused malfunction.)

For purposes of this paragraph the 24-hour exceedance means a continuous exceedance of an emission standard having a total duration of greater than 24 hours (midnight to midnight)

- (VI) Irrespective of the startup and shutdown exemptions set forth on the operating permit of any air contaminant source, no emission shall be allowed which can be proved by the Director to cause or contribute to any violations of the ambient air quality standards set forth in section 14 of these regulations.

34.7 Special Reports Required

- (I) The Director may require any air contaminant source to submit a report within 30 days after the end of each calendar month in a format he/she specifies containing, as a minimum the following information:
 - (a) The dates on which the malfunctions, startups, and shutdowns resulted in emissions greater than those allowed by emission standards in these regulations.
 - (b) The estimated amount of air contaminants emitted in excess of the emission standards in units in pounds of air contaminant per hour and pounds of air contaminant per day.
 - (c) Other emission characteristics such as stack exit temperature, stack height, and diameter, stack exit velocities, and other similar information.
 - (d) Information needed to evaluate the possibility of instituting measures to eliminate or reduce the number of malfunctions and/or the amount of emissions from malfunctions, startups and shutdowns.
 - (e) Information to determine if the excess emissions truly result from a malfunction.
 - (f) Information to evaluate the impact of the emissions on the surrounding areas.

34.8 Rights Reserved

Nothing in this section shall be construed to allow the air contaminant source to violate the ambient air quality standards nor limit the authority of the Director and/or board to institute actions under other sections of these regulations.

34.9 Additional Sources Covered

The Director may order the owner or operator of other air contaminant of other air contaminant sources to report in accordance with the requirements of this section for those sources in nonattainment areas or significantly impacting on nonattainment areas when he/she has reason to believe that an ambient air quality standard may be violated in the general vicinity where the source is located. There is sufficient reason (for purposes of this rule) to believe a standard may be violated if a value not to be exceeded more than once in a year is equaled or exceeded once and/or if individual readings have a mean excess of ninety percent of a standard set for any given averaging interval regardless of the acceptability of the monitoring site, calibration of the monitor, and other similar matters. Even if there are no monitors in an area, if a mathematical modeling and/or physical damage in the area indicate the standards may be violated, he/she may order such reporting.