LINCOLN-LANCASTER COUNTY AIR POLLUTION CONTROL PROGRAM

ARTICLE 2. REGULATIONS AND STANDARDS

SECTION 22.INCINERATOR EMISSIONS

The following provisions shall apply to the following categories of incinerators, except those that are specifically regulated by the federal New Source Performance Standards and the Resource Recovery and Conservation Act: Category I - All incinerators used for refuse disposal, except those burning Type 5 waste, or for the processing of salvageable materials and including those used exclusively for the burning Type 4 waste; and Category II - All incinerators that burn Type 5 waste.

(A) All Category I incinerators shall comply with the following requirements:

(1) No person shall cause or permit emissions of particulate matter from any incinerator to be discharged into the outdoor atmosphere to exceed 0.10 grains per dry standard cubic foot (gr./dscf) of exhaust gas, corrected to 12% carbon dioxide. The exhaust gases contributed by the burning of a liquid or gaseous fuel shall be excluded.

(2) The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Director in accordance with good engineering practice.

(3) Waste burned during performance testing required by paragraph (4) below shall be representative of the waste normally generated by the Affected facility and shall be charged at a rate equal to the burning capacity of the incinerator. Copies of any additional operational data recorded during the test shall be submitted to the Department together with the completed test report forms.

(4) Instructions for proper operation of each incinerator shall be posted on site and written certification that each operator has read these instructions, understands them and intends to comply, shall be kept on record by the owner.

(B) All Category II incinerators shall comply with the following requirements:

(1) Design

(a) Automatically controlled auxiliary burners capable of heating and maintaining the combustion in the primary combustion chamber at a minimum temperature of 13000 F and a one-hour average temperature of 14000 F; and in the secondary combustion chamber at a minimum temperature of 18000 F for two seconds residence time at an oxygen concentration greater than 7% by volume measured on a dry basis.

(b) fugitive emissions control system for the waste incinerator and its pollution control devices including double doors on the feed chamber with interlocks to prevent both doors from being opened at once.

(c) A door lockout mechanism which prevents charging of waste between the manufacturer’s designated burn cycle and which prevents charging if primary or secondary chamber temperatures fall below designated minimum temperature and/or carbon monoxide levels exceed designated shutdown criteria and/or excess visible emissions occur.

(d) A pollution control system containing at a minimum either an acid gas scrubber and a particulate control device, or a dry sorbent injection and fabric filter, shall be in place and in workingorder with a maximum emission gas temperature of 3000F continuously monitored and recorded exiting from the pollution control system.

(e) Except during periods of start-up and shutdown, achieve a combustion efficiency (CE) of ninety-nine and nine-tenths percent (99.9%) based on a clock-hour average, to be calculated as follows:

$$CE = \frac{CO_2}{CO_2 + CO} \times 100$$

where CO_2 = carbon dioxide in the exhaust gas, ppmv (dry); and CO = carbon monoxide in the exhaust gas, ppmv (dry).

(f) The appropriate access in the stack and other flue areas for sampling to determine compliance with these Regulations and Standards.

(g) A stack design and height built in accordance with good engineering practices.

(2) Emission standards

(a) A particulate matter emissions limit of 0.03 grains per dry standard cubic foot adjusted to 7% oxygen.

(b) Acid gases - hydrochloric acid emissions shall be no greater than 50 parts per million by volume corrected to 7% oxygen on an hourly average or shall be reduced 90% by weight of uncontrolled emissions on an hourly average, whichever is less stringent. Sulfur dioxide emissions shall be no greater than 100 parts per million by volume corrected to 7% oxygen hourly average or shall be reduced to 70% by weight of uncontrolled emissions on an hourly average, whichever is less stringent.

(c) Carbon monoxide - carbon monoxide emissions shall be no greater than 50 parts per million by volume corrected to 7% oxygen on a dry basis as a 4 hour average.

(d) Opacity - the opacity of all emissions except uncombined water shall not exceed 5% for a six minute running average in accordance with the EPA Method 9.

(e) Dioxins/furans shall be limited to no greater than 30 nanograms per dry standard cubic meter (dscm).

(f) Mercury shall be limited to no greater than 50 micrograms per dry standard cubic meter in the stack gas corrected to 7% oxygen. This limit will be waived for those units demonstrating compliance with a particulate matter emissions limit equal to or less than 0.015 grains per dry standard cubic foot at 7% oxygen.

(3) Continuous Monitors with Recorders

(a) The following parameters will be monitored/recorded:

(1) Primary and secondary combustion chamber temperatures, and temperatures at the exit of the pollution control system. Temperature in the secondary chamber shall be recorded a minimum of one second downstream from the entrance of the secondary chamber.

(2) Carbon monoxide in the emission gases.

(3) Opacity of the emission gases.

(b) Continuous monitors with recorders and interlocks shall be in place and in working order to monitor and stop feed to the incinerator if designated levels for the monitored parameters are not achieved. The continuous monitors for carbon monoxide and opacity shall meet Performance Specification 4 and 1, respectively, as provided at 40 CFR, Part 60, Appendix B.

(4) Performance Testing

(a) All existing incinerators shall be performance-tested within one year from the effective date of this regulation.

(b) All new incinerators shall be performance-tested within 180 days after start-up.

(c) After the initial performance test, all incinerators shall be performance-tested a minimum of once every two years.

(d) Wastes burned in conjunction with the performance-testing shall be a representative sample of the refuse to be burned in the incinerator.

(e) Sample and velocity traverses, determination of stack velocity and volumetric flow rate, and gas analysis for carbon dioxide, oxygen, excess air, and dry molecular weight shall be determined according to 40 CFR, Part 60, Appendix A, Methods 1, 2, and 3, respectively.

(f) Particulate matter emissions shall be determined according to 40 CFR, Part 60, Appendix A, Method 5.

(g) Hydrochloric acid (HCL) emissions shall be determined according to 40 CFR, part 60, Appendix A, Method 26.

(h) Sulfur dioxide emissions shall be determined according to 40 CFR, Part 60, Appendix A, Method 6.

(i) Carbon monoxide emissions shall be determined according to 40 CFR, Part 60, Appendix A, Method 10.

(j) Opacity shall be determined according to 40 CFR, Part 60, Appendix A, Method 9.

(k) Dioxins/furans shall be determined according to 40 CFR, Part 60, Appendix A, Method 23.

(l) Mercury emissions shall be determined according to 40 CFR, Part 61, Appendix B, Method 101A.

(5) Ash Testing (Bottom and Fly ash)

Bottom and fly ash shall be tested separately on an annual basis or more frequently as required for carbon residue, TCLP metals, radioactivity, and recognizable organic matter. The carbon residue shall be a maximum of 7% carbon by dry weight and there shall be no recognizable organic matter present. Ash that tests as hazardous must be reported to the Director immediately and manager in accordance with EPA Hazardous Waste Regulations. Radioactivity testing shall be performed in accordance with accepted radiological standards and practices and State and Federal Regulations. Results shall be copied to the appropriate office.

(6) Records and Reporting

(a) The owner shall keep all records pertaining to the operation of the incinerator or the compliance with this regulation for a period of no less than three years, The owner shall provide the Director access to such records during hours of operation as allowed in the operating permit. A summary of all logs, continuous monitor results and records of equipment or operational changes shall be reported quarterly (calendar).

(b) The Air Pollution Control Program or the Lincoln-Lancaster County Health Department shall maintain incinerator compliance records on each permitted waste incinerator for a minimum of five years. All compliance records shall be open to public inspection during regular working hours except when the records are part of an investigation. Copies of such records may be obtained by the public based on actual cost to the Department.

(7) Operator Training

(a) Each incinerator operator shall be trained in the incinerator operating procedures as developed either by the American Society of Mechanical Engineers (ASME), by the incinerator manufacturer or by a trained individual with more than one year’s experience in the operation of the incinerator that the trainee will be operating. Minimum training shall include the basic combustion theory, operating procedures, monitoring of combustion control parameters of the incinerator and all emergency procedures to be followed should the incinerator malfunction or exceed operating parameters.

(b) An operator who meets the requirements of operator training shall be on duty and immediately accessible during all periods of incinerator operation. The manufacturer’s operating instructions and guidelines shall be available on site at all times.

(c) A written certification of the appropriate training received by the operator, with the dates of training that includes a listing of the instructor’s qualifications or ASME certification school, shall be available at the incinerator site at all times.

(8) Compliance Schedule for Existing Incinerators

All existing incinerators shall demonstrate compliance with these requirements no later than 36 months from the effective date of this regulation unless a variance had been obtained by the owner in accordance with applicable law. Any existing incinerator which cannot demonstrate compliance and for which a variance had not been granted within the aforementioned period of time shall terminate operation.

Ref: Title 129, Chapter 22, Nebraska Department of Environmental Quality

EPA Rulemakings

CFR: 40 C.F.R. 52.1420(c)(44)(i)(A)
FRM: 61 FR 5701 (2/14/96)
PRM: 61 FR 5725 (2/14/96)
State Submission: 5/31/95
State Proposal: 2/28/95
State Final: 5/16/95 (effective date locally)
APDB File: NE-37
Description: EPA approved a revision to the SIP that updated the local ordinances of the Lincoln-Lancaster County Health Department and created a Federally enforceable Class II operating permit program. The Lincoln-Lancaster County Air Pollution Control Program rules replaced Chapter 8.64 regulations of the city of Lincoln and Resolution No. 3155 of Lancaster County in their entirety.

Note: All previous versions of the rule are obsolete; the record of prior rulemakings is shown below for historical purposes only.

CFR: 40 C.F.R. 52.1420(c)(24)
FRM: 47 FR 22954 (5/26/82)
PRM: 42 FR 46371 (9/15/77)
State Submission: 12/27/76
State Proposal: 12/10/76
State Final: 3/16/76; 6/21/76 (effective dates locally)
APDB File: NE-08
Description: EPA approved the revised ordinance and regulations for the city of Lincoln. The state withdrew Section 051 of the ordinance and Sections 4, 15, and 17 of the regulations.

CFR: 40 C.F.R. 52.1420(c)(23)
FRM: 47 FR 22954 (5/26/82)
PRM: 42 FR 46371
State Submission: 4/4/77; 2/18/82
State Proposal: 3/18/77
State Final: 2/4/77 (effective date locally)
APDB File: NE-08
Description: EPA approved the Lancaster County regulations into the SIP. Sections 6, 9, and 23 were withdrawn by the state prior to final rulemaking by the EPA.

CFR: 40 C.F.R. 52.1420(a)
FRM: 37 FR 10842 (5/31/72)
PRM: None
State Submission: 1/28/72
State Proposal: Unknown
State Final: 2/28/67 (effective date locally)
APDB File: NE-00
Description: EPA approved the city of Lincoln's ordinance for air pollution control as part of the original SIP.

Difference Between the State and EPA-Approved Regulation

None.