**Section 724.443 Performance Standards**

An incinerator burning hazardous waste must be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under Section 724.445, it will meet the following performance standards:

a) Destruction and Removal Efficiency

1) Except as provided in subsection (a)(2), an incinerator burning hazardous waste must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated (under Section 724.442) in its permit for each waste feed. DRE is determined for each POHC from the following equation:



Where:

|  |  |  |
| --- | --- | --- |
| N | = | Mass feed rate of one principal organic hazardous constituent (POHC) in the waste stream feeding the incinerator |
| O | = | Mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere |

2) An incinerator burning hazardous wastes F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principal organic hazardous constituent (POHC) designated (under Section 724.442) in its permit. This performance must be demonstrated on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in subsection (a)(1).

b) An incinerator burning hazardous waste and producing stack emissions of more than 1.8 kg (4 lbs) per hour of hydrogen chloride (HCl) must control HCl emissions such that the rate of emission is no greater than the larger of either 1.8 kg (4 lbs) per hour or one percent of the HCl in the stack gas prior to entering any pollution control equipment.

c) An incinerator burning hazardous waste must not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) when corrected for the amount of oxygen in the stack gas according to the following formula:



1) Where:

|  |  |  |
| --- | --- | --- |
| C | = | the corrected concentration of particulate matter |
| M | = | the measured concentration of particulate matter |
| Y | = | the measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas, presented in Reference Method 3 in appendix A to 40 CFR 60 (Gas Analysis for the Determination of Dry Molecular Weight), incorporated by reference in 35 Ill. Adm. Code 720.111(b) |

2) This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, the Agency must select an appropriate correction procedure, to be specified in the facility permit.

d) For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 724.445) will be regarded as compliance with this Section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this Section may be "information" justifying modification, revocation or reissuance of a permit under 35 Ill. Adm. Code 702.184.

(Source: Amended at 42 Ill. Reg. 22614, effective November 19, 2018)