**Section 703.223 Incinerator Conditions During Trial Burn**

For the purposes of determining feasibility of compliance with the performance standards of 35 Ill. Adm. Code 724.443 and of determining adequate operating conditions under 35 Ill. Adm. Code 724.445, the Agency must establish conditions in the permit to a new hazardous waste incinerator to be effective during the trial burn.

a) Applicants must propose a trial burn plan, prepared under subsection (b) with Part B of the permit application;

b) The trial burn plan must include the following information:

1) An analysis of each waste or mixture of wastes to be burned that includes the following:

A) Heat value of the waste in the form and composition in which it will be burned;

B) Viscosity (if applicable), or description of physical form of the waste;

C) An identification of any hazardous organic constituents listed in Appendix H to 35 Ill. Adm. Code 721, that are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Appendix H to 35 Ill. Adm. Code 721 that would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified, and the basis for their exclusion stated. The waste analysis must rely on appropriate analytical methods; and

D) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the appropriate analytical methods;

BOARD NOTE: The federal regulations do not themselves define the phrase "appropriate analytical methods", but USEPA did include a definition in its preamble discussion accompanying the rule. The Board directs attention to the following segment (at 70 Fed. Reg. 34538, 34541 (June 14, 2005)) for the purposes of subsections (b)(1)(C) and (b)(1)(D):

[T]wo primary considerations in selecting an appropriate method, which together serve as our general definition of an appropriate method [are the following]…:

1. Appropriate methods are reliable and accepted as such in the scientific community.

2. Appropriate methods generate effective data.

USEPA went on to further elaborate these two concepts and to specify other documents that might provide guidance.

2) A detailed engineering description of the incinerator for which the permit is sought including the following:

A) Manufacturer's name and model number of incinerator (if available);

B) Type of incinerator;

C) Linear dimensions of the incinerator unit including the cross sectional area of combustion chamber;

D) Description of the auxiliary fuel system (type/feed);

E) Capacity of prime mover;

F) Description of automatic waste feed cut-off systems;

G) Stack gas monitoring and pollution control equipment;

H) Nozzle and burner design;

I) Construction materials;

J) Location and description of temperature-, pressure-, and flow-indicating and control devices;

3) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

4) A detailed test schedule for each waste for which the trial burn is planned including dates, duration, quantity of waste to be burned, and other factors relevant to the Agency's decision under subsection (e);

5) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator;

6) A description of, and planned operating conditions for, any emission control equipment that will be used;

7) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction;

8) Such other information as the Agency reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this subsection (b) and the criteria in subsection (e). Such information must be requested by the Agency pursuant to 35 Ill. Adm. Code 705.123;

c) The Agency, in reviewing the trial burn plan, must evaluate the sufficiency of the information provided and must require the applicant, pursuant to 35 Ill. Adm. Code 705.123, to supplement this information, if necessary, to achieve the purposes of this Section;

d) Based on the waste analysis data in the trial burn plan, the Agency must specify as trial Principal Organic Hazardous Constituents (POHCs), those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These trial POHCs must be specified by the Agency based on its estimate of the difficulty of incineration of the constituents identified in the waste analysis, their concentration or mass in the waste feed, and, for wastes listed in Subpart D of 35 Ill. Adm. Code 721, the hazardous waste organic constituent of constituents identified in Appendix G or H to 35 Ill. Adm. Code 721 as the basis for listing;

e) The Agency must approve a trial burn plan if it finds the following:

1) That the trial burn is likely to determine whether the incinerator performance standard required by 35 Ill. Adm. Code 724.443 can be met;

2) That the trial burn itself will not present an imminent hazard to human health or the environment;

3) That the trial burn will help the Agency to determine operating requirements to be specified under 35 Ill. Adm. Code 724.445; and

4) That the information sought in subsections (e)(1) and (e)(3) cannot reasonably be developed through other means;

f) The Agency must send a notice to all persons on the facility mailing list, as set forth in 35 Ill. Adm. Code 705.161(a), and to the appropriate units of State and local government, as set forth in 35 Ill. Adm. Code 705.163(a)(5), announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the Agency has issued such notice.

1) This notice must be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the Agency.

2) This notice must contain the following:

A) The name and telephone number of the applicant's contact person;

B) The name and telephone number of the Agency regional office appropriate for the facility;

C) The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and

D) An expected time period for commencement and completion of the trial burn;

g) During each approved trial burn (or as soon after the burn as is practicable), the applicant must make the following determinations:

1) A quantitative analysis of the trial POHCs, in the waste feed to the incinerator;

2) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial POHCs, molecular oxygen, and hydrogen chloride (HCl);

3) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial POHCs;

4) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in 35 Ill. Adm. Code 724.443(a);

5) If the HCl (hydrogen chloride) emission rate exceeds 1.8 kilograms (4 pounds) of HCl per hour, a computation of HCl removal efficiency, in accordance with 35 Ill. Adm. Code 724.443(b);

6) A computation of particulate emissions, in accordance with 35 Ill. Adm. Code 724.443(c);

7) An identification of sources of fugitive emissions and their means of control;

8) A measurement of average, maximum and minimum temperatures, and combustion gas velocity;

9) A continuous measurement of carbon monoxide (CO) in the exhaust gas;

10) Such other information as the Agency specifies as necessary to ensure that the trial burn will determine compliance with the performance standards in 35 Ill. Adm. Code 724.443 and to establish the operating conditions required by 35 Ill. Adm. Code 724.445 as necessary to meet that performance standard;

h) The applicant must submit to the Agency a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and must submit the results of all the determinations required in subsection (g). This submission must be made within 90 days after completion of the trial burn, or later, if approved by the Agency;

i) All data collected during any trial burn must be submitted to the Agency following the completion of the trial burn;

j) All submissions required by this Section must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under 35 Ill. Adm. Code 702.126;

k) Based on the results of the trial burn, the Agency must set the operating requirements in the final permit according to 35 Ill. Adm. Code 724.445. The permit modification must proceed as a minor modification according to Section 703.280.

BOARD NOTE: Derived from 40 CFR 270.62(b) (2017).

(Source: Amended at 42 Ill. Reg. 20993, effective November 19, 2018)