

7001.0700 HAZARDOUS WASTE THERMAL TREATMENT FACILITY PERMITS.

Subpart 1. **Phase one requirements.** In the permit for a new hazardous waste thermal treatment facility, for the purpose of determining operational readiness following completion of physical construction, the commissioner shall establish permit conditions, including but not limited to, allowable waste feeds and operating conditions. These permit conditions are effective for the minimum time required to bring the thermal treatment facility to a point of operational readiness sufficient to conduct a trial burn, not to exceed 720 hours operating time for treatment of hazardous waste. The commissioner may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to part 7001.0730, subpart 4, item H.

Applicants shall submit to the commissioner a statement, with Part B of the permit application, that suggests the conditions necessary to operate in compliance with the performance standards of part 7045.0542, subpart 4, during this period. This statement must include restrictions on waste constituents, waste feed rates, and the operating parameters identified in part 7045.0542, subpart 6.

The commissioner shall review this statement and other relevant information submitted with Part B of the permit application, and shall specify requirements for this period that are sufficient to meet the performance standards of part 7045.0542, subpart 4.

Subp. 2. **Phase two requirements.** In the permit for a new hazardous waste thermal treatment facility, for the purposes of determining the feasibility of compliance with the performance standards of part 7045.0542, subpart 4, and of determining the adequate operating conditions under part 7045.0542, subpart 6, the commissioner shall establish permit conditions to be effective during the trial burn.

Subp. 3. **Trial burn plan.** An applicant shall submit to the commissioner a trial burn plan with Part B of the permit application. The trial burn plan must include the following information:

A. the results of an analysis of each waste or mixture of wastes to be burned, that uses the analytical techniques set forth in the United States Environmental Protection Agency document SW-846 as incorporated in part 7045.0065 or that uses analytical techniques found by the commissioner to be equivalent to them. This analysis must include:

(1) the heat value of the waste in the form and composition in which it will be burned;

(2) a description of the physical form of the waste and, if applicable, viscosity of the waste;

(3) an identification of any hazardous organic constituents listed in part 7045.0141 that are reasonably expected to be found in the waste;

(4) an identification of all waste constituents listed in part 7045.0141 for which no analysis was done and an explanation of why this analysis was not done; and

(5) an approximate quantification of the hazardous constituents identified in the waste, within the precision specified by Environmental Protection Agency publication SW-846, as incorporated in part 7045.0065;

B. a detailed engineering description of the thermal treatment unit for which the permit is sought, including:

(1) manufacturer's name and model number;

(2) type of thermal treatment unit;

(3) linear dimensions of the thermal treatment unit, including the cross sectional area of the combustion chamber;

(4) a description of the auxiliary fuel system, including type and feed rate;

(5) the capacity of the prime mover;

(6) a description of any automatic waste feed cutoff system;

(7) nozzle and burner design;

(8) construction materials; and

(9) location and description of temperature, pressure, and flow indicating devices and control devices;

C. a detailed engineering description of air pollution control equipment and stack gas monitoring equipment and pollution control monitoring systems, including:

(1) manufacturer's name and model numbers;

(2) physical dimensions; and

(3) where applicable, control specifications as to air flow, pressure drop, discharge, voltage requirements, and water flow;

D. a detailed description of sampling and monitoring procedures, including sampling and monitoring locations, the equipment to be used, frequency of sampling and monitoring, and planned procedures for sample analysis;

E. a detailed test schedule for each waste for which the trial burn is planned, including date, duration, quantity of waste to be burned, and other factors relevant to the agency's decision under subpart 5;

F. a detailed test protocol, including, for each waste identified, the ranges of temperatures, 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 thermal treatment unit;

G. a description of, and planned operating conditions for, emission control equipment that will be used;

H. procedures for rapidly stopping waste feed, for shutting down the thermal treatment unit, and for controlling emissions in the event of an equipment malfunction; and

I. other information as the commissioner finds is reasonably necessary to determine whether to approve the trial burn plan in light of the purposes of subpart 2 and the criteria in subpart 5.

Subp. 4. **Review of trial burn plan.** The commissioner shall review the trial burn plan for completeness. If the commissioner finds that the trial burn plan is incomplete or otherwise deficient, the commissioner shall promptly advise the owner or operator of the incompleteness or deficiency. The commissioner shall suspend further processing of the trial burn plan until the owner or operator has supplied the necessary information or otherwise corrected the deficiency.

The commissioner shall designate as trial principal organic hazardous constituents those constituents for which destruction and removal efficiencies must be calculated during the trial burn. The commissioner's designations shall be based on the waste analysis data submitted by the owner or operator, the commissioner's estimate of the difficulty of thermally treating the hazardous constituents to be burned, and the concentration or mass of hazardous constituents in the proposed waste feed. In addition, if the waste analysis indicates that the waste feed contains wastes that are listed in part 7045.0135, then in making principal organic hazardous constituents determinations the commissioner shall consider the hazardous organic waste constituents identified in part 7045.0139 that formed the basis of this listing.

Subp. 5. **Approval of trial burn plan.** The agency shall approve a trial burn plan if the agency finds that:

A. the trial burn is likely to determine whether the thermal treatment performance standards in part 7045.0542, subpart 4, can be met by the proposed thermal treatment facility;

B. the trial burn itself will not present an imminent hazard to human health or the environment;

C. the trial burn will aid the commissioner in determining operating requirements to be specified under part 7045.0542, subpart 6; and

D. the information sought in items A and C cannot be developed through other means.

Subp. 6. **Conduct of trial burn.** The owner or operator shall conduct the trial burn in accordance with the trial burn plan approved by the agency. The owner or operator shall perform the following analyses or make the following determinations:

A. a quantitative analysis of the trial principal organic hazardous constituents in the waste feed to the thermal treatment unit;

B. a quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial principal organic hazardous constituents, oxygen, and hydrogen chloride;

C. a quantitative analysis of the scrubber water, if any, ash residues, and other residues, for the purpose of estimating the fate of the trial principal organic hazardous constituents;

D. a computation of destruction and removal efficiency, in accordance with the formula specified in part 7045.0542, subpart 4, item A;

E. if the hydrogen chloride emission rate exceeds 1.8 kilograms of hydrogen chloride per hour (four pounds per hour), a computation of hydrogen chloride removal efficiency, in accordance with part 7045.0542, subpart 4, item B;

F. a computation of particulate emissions, in accordance with part 7045.0542, subpart 4, item C;

G. an identification of sources of fugitive emissions and the means of control thereof;

H. a measurement of average, maximum, and minimum temperatures of the thermal treatment zone and combustion gas velocity;

I. a continuous measurement of carbon monoxide, oxygen, and carbon dioxide in the exhaust gas; and

J. other analyses or determinations as the agency may specify as necessary to ensure that the trial burn will determine compliance with the performance standard in part 7045.0542, subpart 4, and to establish the operating conditions required by part 7045.0542, subpart 6, as necessary to meet this performance standard.

Subp. 7. **Submission of certification, results, and data.** The owner or operator shall submit to the commissioner a certification that the trial burn has been carried out in accordance with the approved trial burn plan and shall submit the results of all the analyses and determinations required by subpart 6 along with all underlying data of the results. The owner or operator shall make these submissions within 90 days after the completion of the

trial burn, or later if approved by the commissioner upon a finding by the commissioner that good cause exists for granting a time extension.

Subp. 8. **Authorized signature.** All submissions to the commissioner required by this rule must be signed in accordance with part 7001.0060 and must contain the certification required by part 7001.0540.

Subp. 9. **Phase three requirements.** To allow a new hazardous waste thermal treatment facility to operate after completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the commissioner shall establish permit conditions, including but not limited to allowable waste feeds and operating conditions sufficient to meet the requirements of part 7045.0542, subpart 6. The commissioner may prohibit the burning of hazardous wastes in the facility during this period. These permit conditions are effective for the minimum time required to complete sample analysis, data computation, and submission of the trial burn results by the applicant, and modification of the facility permit by the agency.

An applicant shall submit to the commissioner a statement with Part B of the permit application that identifies the conditions necessary to operate in compliance with the performance standards of part 7045.0542, subpart 4, during this period. This statement must include restrictions on waste constituents, waste feed rates, and the operating parameters identified in part 7045.0542, subpart 6.

The commissioner shall review this statement and other relevant information submitted with part B of the permit application and shall specify requirements for this period most likely to meet the performance standards of part 7045.0542, subpart 4.

Subp. 10. **Phase four requirements.** To allow a new hazardous waste thermal treatment facility to operate after the commissioner reviews the results of the trial burn conducted under phase two, based on the results of the trial burn, the commissioner shall establish operating requirements in the final permit according to part 7045.0542. A permit modification, if necessary, must be completed according to part 7001.0730, subpart 2 or 4 and a permit revocation, if necessary, must be completed according to part 7001.0180, item C.

Subp. 11. **Requirements for existing hazardous waste thermal treatment facilities.** To determine the feasibility of compliance with the performance standards of part 7045.0542, subpart 4, and to determine adequate operating conditions under part 7045.0542, subpart 6, the applicant for a permit for an existing hazardous waste thermal treatment facility must prepare and submit to the commissioner a trial burn plan and perform a trial burn in accordance with subparts 3 to 8 and part 7001.0630, item B, or, instead, submit other information as specified in part 7001.0630, item C. Applicants submitting information under part 7001.0630, item A, are exempt from compliance with part 7045.0542, subparts 4 and 6, and, therefore, are exempt from the requirement to

conduct a trial burn. An applicant who submits trial burn plans and who receives approval before submission of a permit application shall complete the trial burn and submit the results specified in subpart 6 with Part B of the permit application. Trial burn results must be submitted prior to issuance of the permit. If completion of this process conflicts with the date set for submission of the Part B application, the applicant shall contact the commissioner to establish a later date for the submission of the Part B application or trial burn results. When the applicant submits a trial burn plan with Part B of the permit application, the commissioner shall specify a time period prior to permit issuance in which the trial burn must be conducted and the results submitted.

Statutory Authority: *MS s 116.07; 116.37*

History: *8 SR 2276; L 1987 c 186 s 15; 15 SR 1515; 33 SR 2042*

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