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TITLE: Criteria for Using Trial Burn Information Obtained
from One Incinerator to Issue a Permit at a Second
Incinerator in Lieu of Conducting a Second Trial
Burn at the Second Facility

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[]	A- Pending OMB approval
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Regulations: 40 CFR 270.19(d)(2)

Subject: Criteria for Using Trial Burn Information Obtained from One Incinerator to Issue a Permit at a Second Incinerator in Lieu of Conducting a Second Trial Burn at the Second Facility

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Summary:

If an applicant does not want to conduct a trial burn at one incinerator, §270.19(d)(2) requires the applicant to submit adequate data obtained from another facility to specify "sufficiently similar" operating conditions that will ensure compliance with the incinerator performance standards at the facility requesting the permit. The Director must find that the wastes and incinerators are "sufficiently similar" and that the data submitted is adequate to specify operating conditions at the facility seeking a permit. The Director has authority to evaluate both incinerator design and waste characteristics to determine if operating conditions could be set in the permit without conducting a second trial burn.

The regulations do not specify what constitutes "sufficient similarity" in incinerator design. However, The Guidance Manual for Hazardous Waste Incinerator Permits provides details on similarity of incinerator design.

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MEMORANDUM

Subject: PAT Comments: Stauffer Chemicals, Dominguez Hills

From: Randolph L. Chrismon
PAT Incineration CoordinatorTo: John Hart
Permits Section, Region IX

Per Region IX's request, the Headquarter's Permit Assistance Team (PAT) has reviewed the RCRA Part B application submitted by Stauffer Chemicals for its Dominguez Hills facility. This application raises for the first time the issue of whether information obtained from one incinerator is sufficient to issue a permit to another incinerator in lieu of conducting a trial burn at the second facility. As discussed with Bill Wilson and you, the PAT confined its analysis to the issue of incinerator similarity, since an adverse determination on this issue changes the nature of any further analysis of this application.

It is the PAT's conclusion that the Baytown incinerator (where the original trial burn was conducted) is not sufficiently similar to the two Dominguez Hills incinerators to allow EPA to issue a RCRA permit without the applicant first conducting a trial burn at the Dominguez facility. If an applicant does not want to conduct a trial burn, §270.19 requires him to submit data obtained from a facility adequate to specify operating conditions that will ensure compliance with the incinerator performance standards at the facility requesting a permit. See 40 CFR 270.19(d)(2). The Director must find that the wastes and incinerators are "sufficiently similar" and that the data submitted, indeed, is adequate to specify operating conditions at the requesting facility.

The regulations do not specify what constitutes "sufficient similarity" in incinerator design. The Guidance Manual for Hazardous Waste Incinerator Permits does set forth guidance on the issue. The manual represents an exercise of the Agency's best engineering judgement as to what factors are significant in determining whether two incinerators are similar. Great weight was given to the manual and the factors identified there in this analysis.

Very generally, the guidance suggests that the two incinerators not vary by more than 10-20 % in various dimensions (see Table 3-1 in the manual on page 3-4 for a brief synopsis of these factors). The rationale given for this suggestion is that the effects of

different incinerator geometries on factors such as turbulence are difficult to quantify. It is assumed that similar performance may be expected from geometrically similar incinerators. In addition, if the geometries are too dissimilar, the operating parameters used to achieve the requisite 99.99% DRE in the one facility, cannot be inferred to be appropriate at the second facility. Significantly different geometries may affect combustion gas velocity, CO levels, waste feed rate, thermal duty to the combustion chamber, and a variety of other operating parameters that are subject to control through the permit.

An examination of Stauffer's application shows that the two Dominguez units exceed the 10-20% limit in nearly every dimension. Table 1, below, summarizes the comparison between the Baytown incinerator and the two Dominguez units.

TABLE 1
COMPARISON OF PHYSICAL DIMENSIONS
BETWEEN BAYTOWN AND DOMINGUEZ UNITS
(in %)

	Dom. #1	Dom. #2
Volume	-60.5	-41.9
Refrac. ID	-19.5	-19.5
Furn. Length	-39.0	-10.2
Cross Sec. Area	-34.0	-35.5

Stauffer provides some documentation comparing various operating parameters between the Baytown and Dominguez units but because of the widely varying geometries we cannot conclude that similar operating parameters will result in achieving the required DRE at the Dominguez units.

Section 270.19 was primarily intended for facilities with interim status to conduct trial burns without formal Agency approval, and to minimize the necessity for trial burns for package or off-the-shelf units. In either case, nearly all the parameters controlling DRE would be identical. It is understood, however, that even off-the-shelf incinerators may vary in some design parameters even though they have the same operating conditions. Thus, the regulations gave the Director the authority to evaluate both incinerator design and waste characteristics to determine if operating conditions could be set in the permit without conducting a second trial burn. Where, as here, the various factors assessing similarity vary by over 50%, setting operating parameters in the permit for one facility on the basis of a trial burn conducted at the other facility becomes an enormously difficult, if not impossible task.

Based on the above considerations, it is the PAT's conclusion that the Baytown incinerator is not sufficiently similar to the two Dominguez incinerators. Stauffer may not obtain a RCRA permit for incineration without first conducting a trial burn at Dominguez. The PAT has not determined whether a trial burn must be conducted on both of the Dominguez units. It is possible that Dominguez No. 1 and No. 2 are sufficiently similar that only one trial burn need be conducted. Additional information may be necessary to make this determination. We will await word from Stauffer, however, that they intend to pursue a RCRA permit for the Dominguez facility before we make any further analysis on this point.

Please forward Stauffer's response to your NOD to the PAT for evaluation. The PAT will continue to provide technical support to Region IX in evaluating Stauffer's application, and any trial burn plan proposed for Dominguez.

cc: A. Glazer
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