



April 27, 2012

California Energy Commission
Attention: Docket No. 12-BSTD-1
Dockets Office
1516 Ninth Street, MS-4
Sacramento, California 95814

DOCKET	
12-BSTD-1	
DATE	APR 27 2012
RECD.	APR 27 2012

Re: Docket No. 12-BSTD-1

This comment letter is in reference to the current text from the document:

“SECTION 140.9 – PRESCRIPTIVE REQUIREMENTS FOR COVERED PROCESSES

(c) Prescriptive Requirements for Laboratory exhaust systems.

For buildings with laboratory exhaust systems where the minimum circulation rate to comply with code or accreditation standards is 10 ACH or less, the design exhaust airflow shall be capable of reducing zone exhaust and makeup airflow rates to the regulated minimum circulation rate, or the minimum required to maintain pressurization requirements, whichever is larger.

EXCEPTION 1 to Section 140.9(c): Laboratory exhaust systems serving zones where constant volume is required by the Authority Having Jurisdiction, facility Environmental Health & Safety department or other applicable code.

EXCEPTION 2 to Section 140.9(c): New zones on an existing constant volume exhaust system.”

It is not clear from the text whether the design exhaust air flow being discussed in this section is the volume flow rate out of the laboratory areas or the air flow out of the laboratory exhaust stacks. If it is the latter, then this text implies that the laboratory exhaust stack discharge flow rate may be varied based on internal recirculation or pressurization requirements. It should be made clear that while the building exhaust flow rate requirement may be varied based on these parameters, the exhaust stack discharge flow rate must be governed by air quality concerns. Exhaust stack discharge flow is commonly held at a constant rate, with the difference between the stack flow rate and the building exhaust accounted for through the use of “by-pass” air (i.e., un-



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conditioned air brought into the exhaust fan immediately upstream of the fan through a "by-pass" damper).

CPP also recognizes (in fact we promote) the concept that the exhaust stack discharge flow rate should be kept to a minimum. This minimum volume flow rate is based on maintaining acceptable air quality at sensitive outdoor locations such as nearby air intakes or accessible outdoor areas. Therefore, it may be advantageous to separate the discussion on varying the air flow rate out of the laboratory space and varying the air flow rate out of the laboratory exhaust stacks.

A potential alternate wording for paragraph (c) is:

For buildings with laboratory exhaust systems where the minimum circulation rate to comply with code or accreditation standards is 10 ACH or less, the design exhaust airflow shall be capable of reducing zone exhaust and makeup airflow rates to the regulated minimum circulation rate, or the minimum required to maintain pressurization requirements, whichever is larger.

The exhaust stack discharge volume flow rate may differ from the building exhaust flow rate and should be the minimum flow rate that will meet the laboratory air flow rate requirements discussed above and produce acceptable air quality at nearby sensitive locations. Such minimum flow rate should be defined using appropriate dispersion modeling methods as described in ANSI/AIHA Standard Z9.5.

Given that we have not done a comprehensive review of all sections of the documents to be revised, CPP requests that Staff review and implement this recommendation in the most effective fashion within the relevant documents.

Sincerely,

CPP, INC.

Wind Engineering and Air Quality Consultants

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