

**INTER-OFFICE COMMUNICATION**

**PS Memo 99-3**

TO: CP Permit Engineers

FROM: Dennis M. Myers

DATE: August 23, 1999

SUBJECT: Criteria for determining whether equipment is air pollution control equipment or process equipment

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As mentioned in PS Memo 96-4, process equipment that may also function as air pollution control equipment may be considered in limiting a source's potential to emit in certain situations. The purpose of this memo is to provide additional guidance on this issue. When determining whether the equipment is inherent to the process and therefore the effect of the equipment can be taken into account in calculating potential emissions, the following questions should be considered:

1. Is the primary purpose of the equipment to control air pollution? If the equipment is inherent to the process, the answer to this question would be no.
2. Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment? If the equipment is inherent to the process, it would be expected that there would be significant cost savings associated with the equipment.
3. Would the equipment be installed if no air quality regulations are in place? If the equipment is inherent to the process, in general the answer to this would be yes.

In addition to the above questions, it may also be useful to consider whether the process can operate if the equipment is not running. If the equipment is "interlocked" to the process, then a stronger case can be made that the equipment is part of the process.

The above questions are from the attached EPA letter dated November 27, 1995. Although EPA did not specifically list the issue of the equipment being interlocked as an additional criteria, it is also mentioned in the attached letter. If the answers to the above questions indicate that the equipment should be considered inherent to the process, please consult with your unit supervisor before making a final decision. Since these decisions are made on a case by case basis, they also should not be generalized to other situations.

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**Process Equipment Guidance**

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF  
AIR QUALITY PLANNING  
AND STANDARDS

NOV 27 1995

Mr. Timothy J. Mohin  
Government Affairs Manager  
Environment, Health and Safety  
Intel Government Affairs  
888 17th Street Northwest, #860  
Washington, DC 20006-3939

Dear Mr. Mohin:

Thank you for the additional information you provided regarding the exhaust conditioners used in tool operations in the semiconductor industry. We agree with your assessment that, for potential to emit calculations, the exhaust conditioners should be considered as an inherent part of the process.

Criteria for Determining Whether Equipment is Air Pollution  
Control Equipment or Process Equipment

For purposes of determining a source's potential to emit, it is necessary to calculate the effect of air pollution control equipment. Current Environmental Protection Agency (EPA) regulations and policy allow air pollution control equipment to be taken into account if federally enforceable requirements are in place requiring the use of such air pollution control equipment. There are, however, situations for which case-by-case judgements are needed regarding whether a given device or strategy should be considered as air pollution control equipment, or as an inherent part of the process. The EPA believes that the following list of questions should be considered in making such case-by-case judgements as to whether certain devices or practices should be treated as pollution controls or an inherent to the process:

1. Is the primary purpose of the equipment to control air pollution?
2. Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment?
3. Would the equipment be installed if no air quality regulations are in place?

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## Process Equipment Guidance

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If the answers to these questions suggest that equipment should be considered as an inherent part of the process, then the effect of the equipment or practices can be taken into account in calculating potential emissions regardless of whether enforceable limitations are in effect.

### Analysis of the criteria for the semiconductor tools listed

No information supplied to date by Intel suggests that product recovery by the exhaust conditioners is significant. That EPA believes that the first and third criteria are satisfied.

Criteria 1. The exhaust conditioners described in your letter are small treatment systems that are local to the point-of-use of process tools such as etching and deposition processes. The primary purposes are to: (1) increase the uptime of the process tools, (2) to minimize safety hazards, and (3) to prevent impurities from entering other processes.

Criteria 3. The information you have provided suggests strongly that air quality regulations are not the driving factor for installation of the equipment. Moreover, the fact that they are "interlocked" with the process chambers suggests that the process cannot operate unless the exhaust conditioner is in use.

Therefore, based upon a review of the information presented the exhaust conditioners are considered by the EPA to be inherent to the process and can be considered in potential emission calculations without federally enforceable requirements.

### Cautions

The above determination regarding the use of the localized exhaust conditioners in the semiconductor industry is case specific. This determination is not intended to set a precedent for localized pollution control equipment for other source types without a similar case-specific review.

While many types of point-of-use and interlocked treatment device may be considered as "inherent," there does exist, of course, air pollution control equipment at semiconductor facilities that may not meet the above criteria. For example, a remote water scrubber located at the roof of a building would generally be considered an air pollution control device.

If you have any further questions regarding this matter, please call Timothy Smith at (919) 541-4718, or Tony Wayne at (919)541-5439.

Sincerely,

David Solomon  
Acting Group Leader  
Integrated Implementation Group

CC: Chief, Air Branch, Regions I-X  
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