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Consumer and Commercial Products: Control Techniques Guidelines in Lieu of Regulations for Lithographic Printing Materials, Letterpress Printing Materials, Flexible Packaging Printing Materials, Flat Wood Paneling Coatings, and Industrial Cleaning Solvents; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 59

[EPA–HQ–OAR–2006–0672; FRL–8204–9]

Consumer and Commercial Products: Control Techniques Guidelines in Lieu of Regulations for Lithographic Printing Materials, Letterpress Printing Materials, Flexible Packaging Printing Materials, Flat Wood Paneling Coatings, and Industrial Cleaning Solvents

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed determination and availability of draft control techniques guidelines.

SUMMARY: Pursuant to section 183(e)(3)(C) of the Clean Air Act (CAA or the Act), EPA proposes to determine that control techniques guidelines documents (CTGs) will be substantially as effective as national regulations in reducing emissions of volatile organic compounds (VOC) in ozone national ambient air quality standard (NAAQS) nonattainment areas from the following five product categories: Lithographic printing materials, letterpress printing materials, flexible packaging printing materials, flat wood paneling coatings, and industrial cleaning solvents. Based on this determination, EPA may issue CTGs in lieu of national regulations for these product categories. EPA has prepared draft CTGs for the control of VOC emissions from each of the product categories covered by this proposed determination. Once finalized, these CTGs will provide guidance to the States concerning EPA's recommendations for reasonably available control technology (RACT)-level controls for these product categories. EPA further proposes to take final action to list the five Group II consumer and commercial product categories addressed in this notice pursuant to CAA section 183(e).

DATES: *Comments:* Written comments on the proposed determination must be received by September 5, 2006, unless a public hearing is requested by August 11, 2006. If a hearing is requested on the proposed determination, written comments must be received by September 13, 2006. We are also soliciting written comments on the draft CTGs and those comments must be submitted within the comment period for the proposed determination.

Public Hearing. If anyone contacts EPA requesting to speak at a public hearing concerning the proposed determination by August 11, 2006, we will hold a public hearing on August 14, 2006. The substance of any such hearing will be limited solely to EPA's proposed determination under CAA section 183(e)(3)(C) that the CTGs for the five Group II product categories will be substantially as effective as regulations in reducing VOC emissions in ozone nonattainment areas. Accordingly, if a commenter has no objection to EPA's proposed determination under CAA section 183(e)(3)(C), but has comments on the substance of a draft CTG, the commenter should submit those comments in writing.

ADDRESSES: Submit your comments, identified by applicable docket ID number, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *E-mail: a-and-r-docket@epa.gov.*
- *Fax:* (202) 566–1741.
- *Mail:* Comments concerning the Proposed Determination should be sent to: Consumer and Commercial Products, Group II—Determination to Issue Control Techniques Guidelines in Lieu of Regulations, Docket No. EPA–HQ–OAR–2006–0672.

Comments concerning any draft CTG should be sent to the applicable docket, as noted below: Consumer and Commercial Products—Lithographic Printing Materials and Letterpress Printing Materials, Docket No. EPA–HQ–OAR–2006–0536; Consumer and Commercial Products—Flexible Packaging Printing Materials, Docket No. EPA–HQ–OAR–2006–0537; Consumer and Commercial Products—Industrial Cleaning Solvents, Docket No. EPA–HQ–OAR–2006–0535; or Consumer and Commercial Products—Flat Wood Paneling Coatings, Docket No. EPA–HQ–OAR–2006–0538, Environmental Protection Agency, EPA Docket Center, Mailcode 6102T, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Please include a total of two copies.

- *Hand Delivery:* EPA Docket Center, Public Reading Room, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC 20460. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to the applicable docket. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or e-mail. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *www.regulations.gov,* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Public Hearing. If a public hearing is held, it will be held at 10 a.m. at Building C on the EPA campus in Research Triangle Park, NC, or at an alternate site nearby. Persons interested in presenting oral testimony must contact Ms. Dorothy Apple, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Natural Resources and Commerce Group (E143–03), Research Triangle Park, North Carolina 27711, telephone number: (919) 541–4487, fax number (919) 541–3470, e-mail address: *apple.dorothy@epa.gov,* no later than August 11, 2006. Persons interested in attending the public hearing must also call Ms. Apple to verify the time, date, and location of the hearing. If no one contacts Ms. Apple by August 11, 2006 with a request to present oral testimony at the hearing, we will cancel the hearing.

Docket: All documents in the docket are listed in the *http://www.regulations.gov index.* Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at

the EPA Docket Center, Public Reading Room, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

Note: The EPA Docket Center suffered damage due to flooding during the last week of June 2006. The Docket Center is continuing to operate. However, during the cleanup, there will be temporary changes to Docket Center telephone numbers, addresses, and hours of operation for people who wish to make hand deliveries or visit the Public Reading Room to view documents. Consult EPA's **Federal Register** notice at 71 FR 38147 (July 5, 2006) or the EPA Web site at *http://www.epa.gov/epahome/dockets.htm* for current information on docket operations, locations and telephone numbers. The Docket Center's mailing address for U.S. mail and the procedure for submitting comments to *http://www.regulations.gov* are not affected by the flooding and will remain the same.

FOR FURTHER INFORMATION CONTACT: For information concerning the CAA section 183(e) consumer and commercial products program, contact Mr. Bruce Moore, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Natural Resources and Commerce Group (E143–03), Research Triangle Park, North Carolina 27711, telephone number: (919) 541–5460, fax number (919) 541–3470, e-mail address: *moore.bruce@epa.gov.* For further information on technical issues concerning the proposed determinations and draft CTG for lithographic printing materials and letterpress printing materials, contact: Mr. Dave Salman, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Coatings and Chemicals Group (E143–01), Research Triangle Park, North Carolina 27711, telephone number: (919) 541–0859, e-mail address: *salman.dave@epa.gov.* For further information on technical issues concerning the proposed determination and draft CTG for flexible packaging printing materials, contact: Ms. Paula Hirtz, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Coatings and Chemicals Group (E143–01, Research Triangle Park, North Carolina 27711, telephone number: (919) 541–2618, e-mail address: *hirtz.paula@epa.gov.* For further information on technical issues concerning the proposed determination and draft CTG for flat wood paneling coatings, contact: Mr. Lynn Dail, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Natural Resources and Commerce Group (E143–03), Research Triangle Park, North Carolina 27711, telephone number: (919) 541–2363, e-mail address: *dail.lynn@epa.gov.* For further information on technical issues concerning the proposed determination and draft CTG for industrial cleaning solvents, contact: Dr. Mohamed Serageldin, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Natural Resources and Commerce Group (E143–03), Research Triangle Park, North Carolina 27711, telephone number: (919) 541–2379, e-mail address: *serageldin.mohamed@epa.gov.*

SUPPLEMENTARY INFORMATION: *Entities Potentially Affected by this Action.* The entities potentially affected by this action include industrial facilities that use the respective consumer and commercial products covered in this action as follows:

Category	NAICS code [1]	Examples of affected entities
Flexible packaging printing materials.	322221, 326112, 322223, 3265111, 322224, 322225, 332999.	Facilities that use rotogravure or flexographic processes to print materials such as bags, pouches, labels, liners, and wraps using paper, plastic film, aluminum foil, metalized or coated paper or film, or any combination of these materials.
Lithographic printing materials	323110	Facilities engaged in lithographic printing on individual sheets or continuous rolls of substrate material.
Letterpress printing materials	323119	Facilities engaged in letterpress printing on individual sheets or continuous rolls of substrate material.
Industrial cleaning solvents	various [2]	Facilities engaged in cleaning activities associated with manufacturing, repair, and service operations across a wide variety of industry sectors.
Flat wood paneling coatings	321211, 321212, 321219, 321999	Facilities that apply protective, decorative, or functional material to any interior, exterior, or hardboard panel product.
Federal Government		Not affected.
State/local/tribal government		Not affected.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. To determine whether your facility would be affected by this action, you should examine the applicable industry description in sections II.A, III.A, IV.A, and V.A of this notice. If you have any questions regarding the applicability of this action to a particular entity, consult the appropriate EPA contact listed in the **FOR FURTHER INFORMATION CONTACT** section of this notice.

Preparation of Comments. Do not submit information containing CBI to EPA through *http://www.regulations.gov* or e-mail. Send or deliver information identified as CBI only to the following address: Mr. Roberto Morales, OAQPS Document Control Officer (C404–02), U.S. EPA, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina 27711, Attention: Docket ID EPA–HQ–OAR–2006–0672, 0535, 0536, 0537, or 0538 (as applicable). Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

World Wide Web (WWW). In addition to being available in the docket, an electronic copy of this proposed action will also be available on the Worldwide

[1] North American Industry Classification System.

[2] Industrial cleaning solvents are used in various manufacturing, repair, and service operations that span many industry sectors. A detailed list of affected industries and their respective NAICS codes are presented in the draft CTG for industrial cleaning solvents.

Web (WWW) through the Technology Transfer Network (TTN). Following signature, a copy of the proposed action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg/*. The TTN provides information and technology exchange in various areas of air pollution control.

Organization of This Document. The information presented in this notice is organized as follows:

I. Background Information and Proposed Determination

A. The Ozone Problem

Ground-level ozone, a major component of smog, is formed in the atmosphere by reactions of VOC and oxides of nitrogen in the presence of sunlight. The formation of ground-level ozone is a complex process that is affected by many variables.

Exposure to ground-level ozone is associated with a wide variety of human health effects, agricultural crop loss, and damage to forests and ecosystems. Acute health effects are induced by short-term exposures (observed at concentrations as low as 0.12 parts per million (ppm)), generally while individuals are engaged in moderate or heavy exertion, and by prolonged exposures to ozone (observed at concentrations as low as 0.08 ppm), typically while individuals are engaged in moderate exertion. Moderate exertion levels are more frequently experienced by individuals than heavy exertion levels. The acute health effects include respiratory symptoms, effects on exercise performance, increased airway responsiveness, increased susceptibility to respiratory infection, increased hospital admissions and emergency room visits, and pulmonary inflammation. Groups at increased risk of experiencing such effects include active children, outdoor workers, and others who regularly engage in outdoor activities, as well as those with preexisting respiratory disease. Currently available information also suggests that long-term exposures to ozone may cause chronic health effects (e.g., structural damage to lung tissue and accelerated decline in baseline lung function).

B. Statutory and Regulatory Background

Under section 183(e) of the CAA, EPA conducted a study of VOC emissions from the use of consumer and commercial products to assess their potential to contribute to levels of ozone that violate the national ambient air quality standards (NAAQS) for ozone, and to establish criteria for regulating VOC emissions from these products. Section 183(e) of the CAA directs EPA to list for regulation those categories of products that account for at least 80 percent of the VOC emissions, on a reactivity-adjusted basis, from consumer and commercial products in areas that violate the NAAQS for ozone (*i.e.*, ozone nonattainment areas), and to divide the list of categories to be regulated into four groups. EPA published the initial list in the **Federal Register** on March 23, 1995 (60 FR 15264). In that notice, EPA stated that it may amend the list of products for regulation, and the groups of product categories, in order to achieve an effective regulatory program in accordance with the Agency's discretion under CAA section 183(e).

EPA has revised the list several times. See 70 FR 69759 (Nov. 17, 2005); 64 FR 13422 (Mar. 18, 1999). Most recently, in May 2006, EPA revised the list to add one product category, portable fuel containers, and to remove one product category, petroleum dry cleaning solvents. See 71 FR 28320 (May 16, 2006). As a result of these revisions, Group II of the list now comprises the five product categories that are the subject of this action.[3]

Any regulations issued under section CAA 183(e) must be based on ''best available controls'' (BAC). CAA section 183(e)(1)(A) defines BAC as ''the degree of emissions reduction that the Administrator determines, on the basis of technological and economic feasibility, health, environmental, and energy impacts, is achievable through the application of the most effective equipment, measures, processes, methods, systems or techniques, including chemical reformulation, product or feedstock substitution, repackaging, and directions for use, consumption, storage, or disposal.'' CAA section 183(e) also provides EPA with authority to use any system or systems of regulation that EPA determines is the most appropriate for the product category. Under these provisions, EPA has previously issued ''national'' regulations for architectural and industrial maintenance coatings, autobody refinishing coatings and consumer products.[4]

CAA section 183(e)(3)(C) further provides that EPA may issue a CTG in lieu of a national regulation for a product category where the EPA determines that the CTG will be ''substantially as effective as regulations'' in reducing emissions of VOC in ozone nonattainment areas. The statute does not specify how EPA is to make this determination, but does provide a fundamental distinction between national regulations and CTGs. Specifically, for national regulations,

[3] Pursuant to the court's order in *Sierra Club* v. *EPA,* 1:01–cv–01597–PLF (D.C. Cir., March 31, 2006), EPA must take final action on the product categories in Group II by September 30, 2006.

[4] See 63 FR 48792 (September 11, 1998).

CAA section 183(e) defines regulated entities as:

(i) * * * manufacturers, processors, wholesale distributors, or importers of consumer or commercial products for sale or distribution in interstate commerce in the United States; or (ii) manufacturers, processors, wholesale distributors, or importers that supply the entities listed under clause (i) with such products for sale or distribution in interstate commerce in the United States.

Thus, under CAA section 183(e), a regulation for consumer or commercial products is limited to the measures applicable to manufacturers, processors, distributors, or importers of the solvents, materials, or products supplied to the consumer or industry. CAA section 183(e) does not authorize EPA to issue regulations that would directly regulate end-users of these products. By contrast, CTG are guidance documents that recommend RACT measures that States can adopt and apply to the end users of products. This dichotomy (i.e., that EPA cannot directly regulate end-users under CAA section 183(e), but can address end-users through a CTG) created by Congress is relevant to EPA's evaluation of the relative merits of a national regulation versus a CTG.

C. Significance of CTG

CAA section 172(c)(1) provides that state implementation plans (SIPs) for nonattainment areas must include ''reasonably available control measures'' (RACM), including ''reasonably available control technology'' (RACT), for sources of emissions. Section 182(b)(2) provides that States must revise their ozone SIPs to include RACT for VOC sources covered by any CTG document issued after November 15, 1990, and prior to the date of attainment. Those ozone nonattainment areas that are subject to CAA section 172(c)(1) and submit an attainment demonstration seeking more than five years from the date of designation to attain must also meet the requirements of CAA section 182(b)(2) and revise their ozone SIPs in response to any CTG issued after November 15, 1990, and prior to the date of attainment. Other ozone nonattainment areas subject to CAA section 172(c)(1) may take action in response to this guidance, as necessary to attain.

EPA defines RACT as ''the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility, 44 FR 53761 (Sept. 17, 1979).'' In subsequent **Federal Register** notices, EPA has addressed how states can meet the RACT requirements of the Act. Significantly, RACT for a particular industry is determined on a case-by-case basis, considering issues of technological and economic feasibility.

EPA provides states with guidance concerning what types of controls could constitute RACT for a given source category through issuance of a CTG. The recommendations in the CTG are based on available data and information and may not apply to a particular situation based upon the circumstances. States can follow the CTG and adopt State regulations to implement the recommendations contained therein, or they can adopt alternative approaches. In either event, States must submit their RACT rules to EPA for review and approval as part of the SIP process. EPA will evaluate the rules and determine, through notice and comment rulemaking in the SIP process, whether they meet the RACT requirements of the Act and EPA's regulations. To the extent a State adopts any of the recommendations in a CTG into its State RACT rules, interested parties can raise questions and objections about the substance of the guidance and the appropriateness of the application of the guidance to a particular situation during the development of the State rules and EPA's SIP approval process.

We encourage States in developing their RACT rules to consider carefully the facts and circumstances of the particular sources in their States because, as noted above, RACT is determined on a case-by-case basis, considering issues of technological and economic feasibility. For example, a state may decide not to require 90 percent control efficiency at facilities that are already well controlled, if the additional emission reductions would not be cost-effective. States may also want to consider reactivity-based approaches, as appropriate, in developing their RACT regulations.[5] Finally, if States consider requiring more stringent VOC content limits than those recommended in the draft CTGs, states may also wish to consider averaging, as appropriate. In general, the RACT requirement is applied on a short-term basis up to 24 hours.[6] However, EPA guidance permits averaging times longer than 24 hours under certain conditions.[7] The EPA's Economic Incentive Policy''[8] provides guidance on use of long-term averages with regard to RACT and generally provides for averaging times of no greater than 30 days. Thus, if the appropriate conditions are present, States may consider the use of averaging in conjunction with more stringent limits. Because of the nature of averaging, however, we would expect that any State RACT Rules that allow for averaging also include appropriate recordkeeping and reporting requirements.

By this action, we are making available four draft CTGs that cover the five product categories in Group II of the CAA section 183(e) list. We are consolidating lithographic printing materials and letterpress printing materials into one CTG document. These CTGs are guidance to the States and provide recommendations only. A State can develop its own strategy for what constitutes RACT for the Group II product categories, and EPA will review that strategy in the context of the SIP process and determine whether it meets the RACT requirements of the Act and its implementing regulations.

Finally, CAA section 182(b)(2) provides that a CTG issued after 1990 specify the date by which a State must submit a SIP revision in response to the CTG. In the draft CTGs at issue here, EPA provides that States should submit their SIP revisions within one year of the date that the CTGs are finalized.

D. General Considerations in Determining Whether a CTG Will Be Substantially as Effective as a Regulation

CAA Section 183(e)(3)(C) authorizes EPA to issue a CTG in lieu of a regulation for a category of consumer and commercial products if a CTG ''will be substantially as effective as regulations in reducing [VOC] emissions'' in ozone nonattainment areas. The statute does not specify how EPA is to make this determination.

On July 13, 1999 (64 FR 37773), EPA issued a final determination pursuant to CAA section 183(e)(3)(C), concluding that CTGs for wood furniture coatings, aerospace coatings, and shipbuilding and repair coatings were substantially as

[5] ''Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans,'' 70 FR 54046 (September 13, 2005).

[6] See, e.g., 52 FR at 45108, col. 2, ''Compliance Periods'' (November 24, 1987). ''VOC rules should describe explicitly the compliance timeframe associated with each emission limit (e.g., instantaneous or daily). However, where the rules are silent on compliance time, EPA will interpret it as instantaneous.''

[7] Memorandum from John O'Connor, Acting Director of the Office of Air Quality Planning and Standards, January 20, 1984, ''Averaging Times for Compliance with VOC Emission Limits-SIP Revision Policy.''

[8] ''Improving Air Quality with Economic Incentive Programs, January 2001,'' available at *http://www.epa.gov/region07/programs/artd/air/policy/search.htm.*

effective as national regulations in reducing emissions of VOC from these products in areas that violate the NAAQS for ozone. Recognizing that the statute does not specify any criteria for making a determination under CAA section 183(e)(3)(C), EPA, in 1999 considered several relevant factors, including: (1) The product's distribution and place of use; (2) the most effective entity to target to control emissions—in other words, whether it is more effective to achieve VOC reductions at the point of manufacture of the product or at the point of use of the product; (3) consistency with other VOC control strategies; and (4) estimates of likely VOC emission reductions in ozone nonattainment areas which would result from the regulation or CTG. EPA believes that these factors are useful for evaluating whether the rule or CTG approach would be best from the perspective of implementation and enforcement of an effective strategy to achieve the intended VOC emission reductions. As we consider other product categories in the current and future phases of regulation under CAA section 183(e), there may be other factors that are relevant to the CAA section 183(e)(3)(C) determination for given product categories. EPA believes that in making these determinations, no single factor is dispositive. On the contrary, for each product category, we must weigh the factors and make our determination based on the unique set of facts and circumstances associated with each product category. For purposes of making the determination, EPA analyzed the components of the draft CTGs for the product categories at issue and compared the CTGs to the types of controls and emission strategies possible through a regulation. As we explained in 1999, it would be unreasonable for EPA, in effect, to have to complete both the full rulemaking and full CTG development processes before being able to make a determination under CAA section 183(e)(3)(C) validly. EPA believes that for most product categories, it is possible for the Agency to make a determination between what a rule might reasonably be expected to achieve versus what a CTG might reasonably be expected to achieve, without having to complete the entire rulemaking and CTG processes. To conclude otherwise would result in unnecessary wasting of limited time and resources by the Agency and the stakeholders participating in the processes. Moreover, such an approach would be directly contrary to CAA section 183(e)(3)(C), which authorizes EPA to issue a CTG in lieu of a regulation if it determines that the CTG ''will be substantially as effective as'' a regulation in reducing VOC emissions in ozone nonattainment areas.

With regard to the five product categories at issue here, EPA notes that it does not have reliable quantitative data that would enable it to conduct a ton-by-ton comparison of the likely emission reductions associated with a national regulation versus a CTG. Although we conducted such a comparative analysis in 1999 for the product categories of wood furniture coatings, aerospace coatings and shipbuilding and repair coatings, (64 FR 37773, July 13, 1999), such analysis is not necessary for evaluating likely VOC emission reductions, particularly, where, as here, a CTG can achieve significant emission reductions from end-users, which cannot be achieved through regulation under CAA section 183(e).

E. Proposed Determination

Based on the factors identified above and the facts and circumstances associated with each of the Group II product categories, EPA proposes to determine that CTGs for lithographic printing materials, letterpress printing materials, flexible packaging printing materials, flat wood paneling coatings and industrial cleaning solvents will be substantially as effective as national regulations in reducing VOC emissions from facilities located in ozone nonattainment areas.

The following four sections address the five product categories that comprise Group II of the CAA section 183(e) list. We address lithographic printing materials and letterpress printing materials in one section below. Although these are two distinct product categories in the CAA section 183(e) list, offset lithographic printing and letterpress printing have many similarities in terms of the types of inks and cleaning materials used, the sources of VOC emissions and the controls available to address those emissions. Based on these similarities, EPA has concluded that it is appropriate to address the categories together and to issue a single CTG that covers both product categories.

In each of the product-category sections below, we provide a general description of the industry, identify the sources of VOC emissions associated with the industry, summarize the recommended control techniques in the draft CTG and describe the impacts of those techniques, and discuss the considerations supporting our proposed determination under CAA section 183(e)(3)(C) that a CTG will be substantially as effective as a regulation in reducing VOC emissions in ozone nonattainment areas from the product category at issue.

The specific subsections below that address our proposed determination for each product category are organized into two parts, each of which addresses two of the factors relevant to the CAA section 183(e)(1)(C) determination. The first part addresses whether it is more effective to target the point of manufacture of the product or the point of use for purposes of reducing VOC emissions and discusses whether our proposed approach is consistent with state and local VOC reduction strategies. The second part addresses the product's distribution and place of use and discusses the likely VOC emission reductions associated with a CTG, as compared to a regulation.

Finally, we propose to find that these five product categories are appropriate for inclusion on the CAA section 183(e) list in accordance with the factors and criteria that EPA used to develop the original list. See Consumer and Commercial Products: Schedule for Regulation, 60 FR 15264 (Mar. 23, 1995).

F. Availability of Documents

EPA has prepared four draft CTG documents covering the five consumer and commercial products source categories addressed in this action. Lithographic printing materials and letterpress printing materials are included in one draft CTG document. Each of the draft CTGs addresses, among other things, RACT recommendations, cost impacts, and State and local regulations. These draft CTGs are available for public comment and are contained in the respective dockets listed in the **ADDRESSES** section of this notice.

II. Lithographic Printing Materials and Letterpress Printing Materials

A. Industry Characterization

Lithographic printing materials and letterpress printing materials are two of the product categories in Group II of the section 183(e) list. Not only are these distinct product categories, they are distinct printing processes. Nevertheless, offset lithographic printing and letterpress printing have many similarities in terms of the types of inks and cleaning materials used, the sources of VOC emissions and the controls available to address these emissions. Accordingly, for purposes of simplifying the discussion in this notice, we have combined the

discussion of offset lithographic printing and letterpress printing.

1. Source Category Description

These categories of consumer and commercial products include the inks and other associated materials used by offset lithographic printers and letterpress printers.

Offset lithography is a planographic method of printing. The term ''planographic'' denotes that the printing and non-printing areas are in the same plane on the surface of a thin metal lithographic plate. To maintain the distinction between the areas on the lithographic plate, the image area is rendered oil receptive, and the non-image area is rendered water receptive.

Offset lithography is an indirect printing method; that is, ink is not transferred directly to a substrate. Rather, ink is transferred from the lithographic plate to a rubber-covered, intermediate ''blanket'' cylinder and then transferred from the blanket cylinder to the substrate. The offset lithographic process is used for a broad range of printing applications, including books, magazines, periodicals, labels and wrappers, catalogs and directories, financial and legal documents, business forms, advertising brochures, newspapers, newspaper inserts, charts and maps, calendars, tickets and coupons, greeting cards, and stamps.

Letterpress printing is a printing process in which the image area is raised relative to the nonimage area and the paste ink is transferred to the substrate directly from the image surface. Letterpress printing is no longer an economically significant segment of the printing market. Some newspapers, corrugated boxes and kraft paper are still printed by letterpress.

2. Processes, Sources of VOC Emissions, and Controls

a. Offset Lithographic Printing

There are two types of offset lithography characterized by the method in which the substrate is fed to the press. In sheet-fed printing, individual sheets of paper or other substrate are fed to the press. In web printing, continuous rolls of substrate material are fed to the press and rewound or cut to size after printing. VOC emissions from offset lithographic printing result from evaporation of components of the inks, fountain solutions, and cleaning materials.

The inks used in offset lithographic printing are a source of VOC emissions. The amount of VOC emitted varies depending on the type of offset lithographic printing process.

Heatset web offset lithographic inks require heat to set the ink. Heatset web inks may contain up to 45 weight percent VOC (ink oils). In heatset web offset lithographic printing, 20 percent of the petroleum ink oils and essentially all of the vegetable ink oils are retained in the substrate and dry ink film. The remaining 80 percent of the petroleum ink oil is volatilized in and then exhausted from the dryer. Consequently, volatilized ink oils can be a significant source of VOC emissions from heatset web offset lithographic printing operations. Most heatset web offset lithographic printing dryers, however, are equipped with control devices such as a thermal oxidizer, catalytic oxidizer, or chiller condenser. These control devices significantly reduce VOC emissions from heatset web offset lithographic printing.

Coldset web and sheet-fed offset lithographic inks dry by absorption into the substrate or by oxidation. The petroleum ink oils in sheet-fed and coldset web inks have higher boiling points than the petroleum ink oils in heatset inks. Coldset web inks usually contain below 35 percent weight VOC (ink oils). Most sheet-fed inks contain below 25 weight percent VOC (ink oils). In sheet-fed and coldset web offset lithographic printing, 95 percent of the petroleum ink oils and essentially all of the vegetable oils are retained in the substrate and dry ink film. As a result, VOC emissions from sheet-fed and coldset web offset lithographic inks are very low.

Some radiation (ultra-violet and electron beam) cured offset lithographic materials are also used. These materials do not contain ink oils. Their VOC content and emissions are usually extremely low.

The second source of VOC emissions from offset lithographic printing is the fountain solution used in conjunction with the inks. Fountain solution is unique to lithography and is not used in other printing processes.

Fountain solution is applied to the lithographic plate to render the non-image areas unreceptive to ink. The on-press fountain solution is typically a mixture of water and fountain solution concentrate. The concentrate contains additives such as gum arabic or synthetic resins, acids, and buffer salts to maintain the pH of the solution, and a wetting agent or ''dampening aid'' to enhance the spreadability of the fountain solution across the plate. The dampening aid reduces the surface tension of the water as well as increases viscosity.

Fountain solutions can be the source of a significant portion of the VOC emitted by offset lithographic printing operations. Historically, alcohols such as isopropyl alcohol, n-propyl alcohol and ethanol were used as the dampening aid. Over the past 20 years, many printers have reduced their emissions from fountain solution by reducing the alcohol content of the fountain solution or refrigerating the fountain solution. In addition, many printers have further reduced VOC emissions by switching to alcohol substitutes, most commonly certain glycol ethers.

The third source of VOC emissions from offset lithographic printing is cleaning materials. Cleaning materials are used to wash the blankets, rollers, and outside of presses, and to remove residues of excess ink between color changes. These materials are typically mixtures of organic (often petroleum-based) solvents. Cleaning materials can be the source of a significant portion of the VOC emitted by lithographic printing operations. The keys to reducing VOC emissions from offset lithographic printing cleaning materials are reducing the composite vapor pressure of the material used and work practices. Low-VOC content waterborne cleaning materials have been tested but have not proven to be a satisfactory alternative.

b. Letterpress Printing

The VOC emissions from letterpress printing result from the evaporation of components of the inks and cleaning materials. Fountain solution is not used in letterpress printing. Letterpress inks are similar to offset lithographic inks. They are paste inks containing petroleum oils or vegetable oils. Both sheet-fed and web presses are used for letterpress printing.

Sheet-fed letterpress presses use coldset inks. Most web letterpress equipment use coldset inks. These letterpress inks are similar in composition and behavior to sheet-fed and coldset web lithographic inks. In sheet-fed and coldset web letterpress printing, 95 percent of the petroleum ink oils and essentially all of the vegetable oils are retained in the substrate and dry ink film. As a result, VOC emissions from sheet-fed and coldset web letterpress inks are very low.

There are also some heatset web letterpress printers. Heatset letterpress ink is similar to heatset lithographic ink with 20 percent of the petroleum ink oils and essentially all of the vegetable ink oils retained in the substrate and dry ink film. The remaining ink oil is volatilized in and then exhausted from the dryer. Heatset web letterpress

printing dryers may be equipped with control devices such as a thermal oxidizer, catalytic oxidizer, or chiller condenser. These control devices would significantly reduce VOC emissions from heatset letterpress printing.

The most significant source of VOC emissions in the letterpress process is cleaning materials. Cleaning materials are used to wash the rollers, plates and outside of presses. The cleaning materials used for letterpress printing are similar to those used in lithographic printing. These materials are typically mixtures of organic (often petroleum-based) solvents. The keys to reducing VOC emissions from letterpress printing cleaning materials are reducing the composite vapor pressure of the material used and work practices.

3. State and Local Regulations

Seventeen States or local areas have VOC emission regulations for offset lithographic printing operations. Five states or local areas have regulations for letterpress printing operations. These rules generally limit the alcohol or alcohol substitute content of fountain solutions and the composite vapor pressure of cleaning materials, and require control of heatset dryer exhaust. More detail on these rules is provided in the draft CTG.

B. Recommended Control Techniques

The draft CTG recommends certain control techniques for heatset dryers, fountain solution and cleaning. The recommendations in the draft CTG apply to offset lithographic printing operations or letterpress printing operations that emit at least 6.8 kg/day (15 lb/day) of VOC before consideration of control. The 15 lb/day level of emissions has been the applicability threshold for many CTGs in the past.[9] For purposes of determining whether this applicability threshold is met, emissions from all offset lithographic printing, letterpress printing, and cleaning activities associated with offset lithographic printing or letterpress printing at a given facility are included. The only exception to this threshold relates to the add-on control recommendations provided below for heatset web offset lithographic printing operations and heatset web letterpress printing operations, and that exception is described below.

1. Offset Lithographic Printing

In the draft CTG, the recommended level of control for VOC emissions from exhaust from heatset web offset lithographic dryers is a 90 percent reduction in VOC for control equipment installed before March 14, 1995. The draft CTG further recommends that control equipment installed on or after March 14, 1995, achieve 95 percent efficiency. These levels of control can be achieved by thermal oxidizers, catalytic oxidizers and chiller condensers. In light of technological improvements, add-on controls installed on or after March 14, 1995 can achieve 95 percent VOC reduction. To accommodate situations where the inlet VOC concentration is so low that a 90 or 95 percent reduction may not be achievable, an outlet concentration alternative is also recommended.

The above recommended levels of control apply only to heatset web offset lithographic printing operations with potential to emit from the dryers of at least 25 tpy of VOC combined from heatset inks and carryover of alcohol substitutes (fountain solution) and low vapor pressure automatic blanket wash materials, before consideration of controls. We are recommending the 25 tpy threshold for add-on controls for heatset ink printers because the limited information currently available to us suggests that controls for small printers may be more costly for a given amount of emission reduction. In the 1993 draft CTG, EPA examined the cost of controlling heatset dryer emissions from four different size model plants. Annual ink oil emissions, before control, from the dryers at these facilities were approximately 25, 50, 100 and 200 tons per year (tpy). The cost-effectiveness of controlling these ink oil emissions was estimated to range from $1,300 per ton at the largest model facility to $2,300 per ton at the smallest model facility (1990 dollars). In 2005 dollars, this equates to $1,800 per ton at the largest model facility and $3,100 per ton at the smallest model facility. More recently, EPA learned of a heatset web offset lithographic book printing facility with potential to emit 26 tpy of VOC from ink and alcohol substitute (fountain solution) carryover, before control, from the dryers on five heatset web offset lithographic presses. Book printing tends to have much lighter coverage and lower dryer exhaust VOC concentration than other types of heatset printing (*e.g.*, magazine printing). In this case the VOC concentration of the dryer exhaust was very low. A 2004 state BACT analysis for this facility did not require the installation of control equipment. The cost per ton of controlling heatset dryer emissions was estimated by the facility to be $15,500 per ton which is significantly higher than that estimated for the smallest model facility in the 1993 draft CTG.

We recognize that we have limited information on small heatset web facilities and the costs of controlling VOCs emitted from the dryers at these smaller sources. To allow us to assess the cost of controlling dryer emissions at small heatset web facilities and the appropriateness of the 25 tpy threshold for controlling dryer exhaust from heatset web printers, we request information on the mass of ink oil emissions and mass of alcohol substitute and automatic blanket wash carryover before control, dryer exhaust rates, and other relevant operating parameters for facilities with potential to emit from heatset dryers up to 100 tpy. We would also welcome information on the experience of smaller facilities in controlling their dryer emissions, including any alternative control approaches, and the cost of such controls.

No limits or controls are recommended for VOC emissions from sheet-fed and coldset web offset lithographic inks. In sheet-fed and coldset web offset lithographic printing, 95 percent of the petroleum ink oils and essentially all of the vegetable oils are retained in the substrate and dry ink film. As a result, VOC emissions from sheet-fed and coldset web offset lithographic inks are already very low.

The recommended level of control for VOC emissions from fountain solution for heatset web printing is 1.6 percent alcohol (by weight) in the fountain or equivalent. The draft CTG recommends three different approaches for achieving this recommended level of control. The first approach involves reducing the alcohol content to 1.6 percent alcohol or less (by weight). The second approach involves using 3 percent alcohol or less (by weight) in the fountain solution provided the fountain solution is refrigerated to below 60 °F (15.5 °C). The third approach involves using 5 percent alcohol substitute or less (by weight) and no alcohol in the fountain solution.

The recommended level of control for VOC emissions from fountain solution for sheet-fed printing is equivalent to 5 percent alcohol (by weight) in the fountain or equivalent The draft CTG recommends three different approaches for achieving this recommended level of control. The first approach involves reducing the alcohol content to 5.0

[9] See. e.g., Model Volatile Organic Compound Rules for Reasonably Available Control Technology: Planning for Ozone Nonattainment Pursuant to Title I of the Clean Air Act, dated June 1992 (establishing the 15 lb of VOC per day applicability threshold for coating applications for eleven industries, including automobile and light duty truck coating operations and coating of cans, coil, paper, fabric, vinyl, metal furniture, large appliances, magnet wire, miscellaneous metal parts, and flatwood paneling).

percent alcohol or less (by weight). The second approach involves using 8.5 percent alcohol or less (by weight) in the fountain solution provided the fountain solution is refrigerated to below 60°F (15.5° C). The third approach involves using 5 percent alcohol substitute or less (by weight) and no alcohol in the fountain solution.

The recommended level of control for VOC emissions from fountain solution for coldset web is 5 percent alcohol substitute or less (by weight) and no alcohol in the fountain solution.

For all types of offset lithographic printing, the draft CTG recommends the use of cleaning materials with a VOC composite partial pressure less than 10 mm Hg at 20 °C, and that cleaning materials and used shop towels be kept in closed containers. The draft CTG also recommends an allowance for limited, 209 or 418 liters (55 or 110 gallons) per year, use of higher vapor pressure cleaning materials. We request comments on the appropriate size for this allowance and additional information on the specific cleaning activities which require the use of higher vapor pressure cleaning materials.

2. Letterpress Printing

The recommended level of control for VOC emissions from exhaust from heatset letterpress dryers is a 90 percent reduction in VOC for control equipment installed before March 14, 1995. The draft CTG further recommends that new control equipment installed on or after March 14, 1995, be required to achieve 95 percent efficiency. These levels of control can be achieved by thermal oxidizers, catalytic oxidizers, and chiller condensers. In light of technological improvements, add-on controls installed after March 14, 1995 can achieve 95 percent VOC reduction. To accommodate situations where the inlet VOC concentration is low, an outlet concentration alternative is also recommended.

The above recommended levels of control apply only to heatset web letterpress printing operations with potential to emit from the dryers of at least 25 tpy of VOC combined from heatset inks and carryover of automatically applied low vapor pressure cleaning materials, before consideration of controls. For the reasons explained above, we are recommending the 25 tpy threshold for add-on controls for heatset ink letterpress printers because the limited information currently available to us suggests that controls for small heatset printers may be more costly for a given amount of emission reduction. Because we have limited information on small heatset web letterpress facilities and the costs of controlling VOCs emitted from the dryers at these smaller sources, we request additional information on these facilities. The type of information we are requesting is specified above in the discussion concerning add-on controls for heatset web offset lithographic printers.

No limits are recommended for VOC emissions from sheet-fed and coldset letterpress inks. In sheet-fed and coldset web letterpress printing, 95 percent of the petroleum ink oils and essentially all of the vegetable oils are retained in the substrate and dry ink film. As a result, VOC emissions from sheet-fed and coldset web letterpress inks are already very low.

The draft CTG recommends the use of letterpress cleaning materials with a VOC composite partial pressure less than 10 mm Hg at 20 °C, and that cleaning materials and shop used towels be kept in closed containers. The document also recommends an allowance for limited, 209 or 418 liters (55 or 110 gallons) per year, use of higher vapor pressure cleaning materials. We request comments on the appropriate size for this allowance and additional information on the specific cleaning activities which require the use of higher vapor pressure cleaning materials.

C. Impacts of Recommended Control Techniques

In the 1993 draft CTG, EPA estimated baseline emissions from the offset lithographic printing industry in ozone nonattainment areas, based on 1990 data, to be 820,000 tons per year (with 62,000 tpy coming from ink, 631,000 tpy from fountain solution and 126,000 tpy from cleaning.) Commenters on the 1993 draft CTG asserted that the alcohol content (17 percent) used to generate this estimate was too high and that the assumed ratio of fountain solution usage to ink usage was also too high. Baseline emissions from fountain solution may have been overestimated in 1993 by a factor of 2 to 3. This would reduce industry wide baseline emissions to between 400,000 to 500,000 tpy. As for letterpress printers, we have limited emissions data information for this industry. Based on available information, we estimate that VOC emissions from the letterpress printing industry as of 1990 were about 28,000 tons per year.

Based on VOC emissions data and April 2006 ozone nonattainment designations, EPA estimates that 6,700 offset lithographic printing facilities and 2,200 letterpress printing facilities would be affected by the draft CTG. We estimate the cost effectiveness of the recommended control techniques for offset lithographic printing to be $2,000/ton of VOC removed for heatset web dryers and $850/ton of VOC removed for cleaning materials. A cost savings is estimated for fountain solution. We estimate the cost effectiveness of the recommended control techniques for letterpress heatset web dryers and letterpress printing cleaning materials to be similar to the cost effectiveness for offset lithographic heatset dryers and offset lithographic printing cleaning materials.

D. Considerations in Determining Whether a CTG Will Be Substantially as Effective as a Regulation

In determining whether to issue a national rule or a CTG for the product categories of lithographic printing materials and letterpress printing materials under section 183(e)(3)(C), we analyzed the four factors identified above in Section I.D in light of the specific facts and circumstances associated with these product categories. Based on that analysis, we propose to determine that a CTG will be substantially as effective as a rule in achieving VOC emission reductions in ozone nonattainment areas from lithographic printing materials and letterpress printing materials.

As noted above, this section is divided into two parts. In the first part, we discuss our belief that the most effective means of achieving VOC emission reductions in these two categories is through controls at the point of use of the product (i.e., through controls on printers), and this can only be accomplished through a CTG. We further explain that the approaches in the draft CTG are consistent with existing effective state and local VOC strategies. In the second part, we discuss how the distribution and place of use of the products in each of these categories also support the use of a CTG. We further explain that there are control approaches for these two categories that result in significant VOC emission reductions and that such reductions could only be obtained by controlling the use of the product through a CTG. Such reductions could not be obtained through a regulation under section 183(e) because the controls affect the end-user, which cannot be a regulated entity under section 183(e)(1)(C). Accordingly, for these reasons and the reasons described more fully below, we believe that a CTG will achieve greater VOC emission reductions than a rule for these two categories.

1. The Most Effective Entity To Target for VOC Reductions and Consistency With State and Local VOC Strategies

To evaluate the most effective entity to target for VOC reductions, it is important to first identify the primary sources of VOC emissions. There are three main sources of VOC emissions from offset lithography: (1) Evaporation of VOC from the inks; (2) evaporation of VOC from the fountain solution; and (3) evaporation of VOC from the cleaning materials. VOC emissions associated with letterpress printing stem from inks and cleaning materials only; fountain solutions are not used in letterpress printing. We address each of these sources of VOC emissions, in turn, below, as we discuss the CTG versus regulation approach.

a. Inks

A national rule could contain limits for the as-sold VOC content of offset lithographic inks and letterpress inks, but given the nature of the offset lithographic printing and letterpress printing processes, this would result, in little, if any, reduction in VOC emissions.

Inks are a significant source of VOC emissions from heatset web offset lithographic printing and heatset web letterpress printing. In these processes, heat is applied in a dryer to set the inks. As a result of the heating process, about 80 percent of the petroleum ink oil (VOC) is volatilized in the dryer. The remaining 20 percent of petroleum ink oil and all of the vegetable ink oil is retained in the substrate and dry ink film. Since the vegetable ink oil does not volatilize in the dryer, the amount of vegetable ink oil that can be used in heatset inks is very limited. If there is too much vegetable oil in a heatset ink, the ink will not dry properly.

Control devices, such as thermal oxidizers, catalytic oxidizers, or chiller condensers, can achieve a 90 percent or greater reduction in VOC emissions from heatset dryers. In light of the significant reductions in VOC emissions obtained with such devices, existing State and local regulations that address offset lithography require the use of controls on heatset dryer exhaust. The same controls are equally applicable to heatset letterpress dryers.

We could not require such control devices at printers through a national rule, because, pursuant to CAA section 183(e)(1)(C) and (e)(3)(A), the regulated entities subject to a national rule would be the ink manufacturers and suppliers, not the printers. The draft CTG applies to printers, as the end users of the inks, and specifically recommends limiting emissions by requiring printers to install and operate control devices on heatset dryers.

Although both a national rule and a CTG could, in theory, achieve some reduction in VOC emissions from heatset web inks by requiring minimum vegetable oil content or limiting the ratio of petroleum oil to vegetable oil, we do not believe that such an approach is appropriate for addressing the emissions associated with these inks. As noted above, only very limited amounts of vegetable oil can be used in heatset inks. As a result, only a small emission reduction could be achieved, and we believe that this emission reduction—whether pursued through a rule or CTG—would not be cost-effective. Accordingly, the draft CTG does not contain restrictions on vegetable oil content. Given the significant reductions achievable through use of add-on control devices and the limited reductions that would be achieved by a national rule for heatset inks, the most effective entity to regulate VOC emissions associated with heatset web offset lithographic inks and heatset letterpress inks is the printer.

The VOC emissions from sheet-fed and coldset web lithographic inks and sheet-fed and coldset web letterpress inks are inherently very low. First, these inks are lower VOC-content inks than heatset web inks. Second, 95 percent of the petroleum ink oil and essentially all of the vegetable ink oil in sheet-fed and coldset web lithographic inks and sheet-fed and coldset web letterpress inks do not evaporate and are retained in the substrate and dry ink film. Because only a small percentage of the sheet-fed and coldset web lithographic and letterpress ink oils evaporate, VOC emissions associated with these inks are small.

Although both a national rule and a CTG could, in theory, achieve some reduction in VOC emissions from sheet-fed and coldset web inks by requiring a minimum vegetable oil content or limiting the ratio of petroleum oil to vegetable oil, we do not believe that such an approach is appropriate for addressing the limited emissions associated with these inks. Only a small emission reduction could be achieved, and we believe that this emission reduction—whether pursued through a rule or a CTG—would not be cost-effective. There are therefore no restrictions on vegetable oil content in the draft CTG.

In addition, there are no cost-effective control devices to address VOC emissions from sheet-fed and coldset web lithographic and letterpress printers because the emissions that occur from these processes are diffuse and spread over a large area. Such emissions stand in contrast to those associated with heatset offset web lithographic inks and heatset letterpress inks, as the petroleum oils in those inks volatilize in a dryer and can be controlled in a cost-effective manner because they are emitted in a more concentrated form from a discrete source. Thus, the draft CTG, while a viable approach for addressing VOC emissions associated with heatset web inks with add-on controls, does not contain any add-on control recommendations for sheet-fed and coldset web inks because of the absence of any cost-effective control devices.

b. Fountain Solutions [10]

Fountain solutions contain alcohol or alcohol substitutes, which are VOCs. Fountain solutions are generally purchased in the form of fountain solution concentrate from vendors serving offset lithographic printers. The printers—the end-users of the fountain solution—buy the concentrate and dilute it with water to make ''press-ready'' fountain solution. The more the concentrate is diluted, the lower the VOC content of the press-ready fountain solution and the fewer VOC emissions result.

A national rule requiring fountain solution concentrate manufacturers and suppliers to package the fountain solution concentrate with less VOC would not be an effective means of addressing VOC emissions in ozone nonattainment areas. In this regard, we could, in theory, require the manufacturer or supplier to sell only pre-diluted fountain solution with a specified amount of VOC content. The effect of such a rule could be easily subverted, however, because the rule would not, in any way, affect the actions of the end-user of the fountain solution, i.e., the printers. In particular, printers can purchase alcohol or alcohol substitutes from a variety of sources and add these to the pre-diluted fountain solution concentrate, which would effectively nullify the reformulation actions of the manufacturer and supplier, resulting in no net change in VOC emissions in ozone nonattainment areas. By contrast, a CTG can reach the users of the product and can therefore implement controls or practices by the user that are more likely to achieve the intended VOC emission reduction goal.

In addition, printers purchase fountain solution concentrate with the intention of diluting the solution with

[10] This section addresses offset lithographic printing only because fountain solutions are not used in letterpress printing.

water, as appropriate, for the particular printing at issue. Thus, a regulation requiring dilution of the fountain solution concentrate by the manufacturer would be redundant of the actions that will be taken by the printers. The only result of such a national regulation would be increased shipping costs for printers. Shipping costs would increase because diluting the fountain solution concentrate would increase the volume of material to be shipped to the printers.

A national rule also, in theory, could prohibit fountain solution manufacturers and suppliers from selling fountain solution concentrates which contain alcohol or alcohol substitutes. Similar to the reformulation strategy described above, the net effect of such a rule could be easily nullified by actions of the printers, because nothing precludes the printers from purchasing alcohol or alcohol substitutes from vendors that would not be subject to the section 183(e) regulation. Moreover, most offset lithographic printing requires some alcohol or alcohol substitute in the fountain solution, so prohibiting alcohol or alcohol substitutes in fountain solution concentrate would be impractical.

Although a national rule could, in theory, prohibit the sale of all alcohol and alcohol substitutes regardless of specified end use for purposes of reducing VOC emissions from the offset lithographic and letterpress printing industries, such an approach is unreasonable and impractical, as it would preclude the use of alcohol in all contexts just to obtain VOC reductions in ozone nonattainment areas from two limited product categories. A more effective approach is to target reductions through controls on the end-user, the printers, through a CTG. Specifically, the draft CTG recommends limiting the on-press VOC (alcohol or alcohol substitute) content of fountain solutions, or refrigerating the fountain solution to reduce evaporation of VOC. These approaches are consistent with approaches already taken by State and local authorities, and they have proven effective in reducing VOC emissions.

c. Cleaning Materials

There are two primary means to control VOC emissions associated with the cleaning materials used in the offset lithographic printing process and the letterpress printing process: (1) Limiting the composite vapor pressure of the cleaning materials, and (2) implementing work practices governing the use of the product. A national rule affecting lithographic cleaning material and letterpress cleaning material manufacturers that limits the composite vapor pressure of VOC in the cleaning materials sold suffers from the same deficiencies noted above with regard to fountain solutions. Specifically, although lithographic printers and letterpress printers generally purchase cleaning materials from vendors serving their respective industry, nothing in a national rule governing manufacturers would preclude them from purchasing bulk solvents or other multipurpose cleaning materials from other vendors. The general availability of bulk solvents or multipurpose cleaning materials from vendors that would not be subject to the regulation would directly undermine the effectiveness of the regulation.

A national rule also could, in theory, limit the composite vapor pressure of all cleaning materials and all solvents sold regardless of specified end use, which would ensure that only low composite vapor pressure materials are available for lithographic printing and letterpress printing. Such an approach is unreasonable and impractical. Cleaning materials and solvents are sold for multiple different commercial and industrial purposes. Reducing the vapor pressure of all materials merely to achieve VOC emission reduction from two limited product categories, could preclude the use of such materials in many important, legitimate contexts.

The more effective approach for obtaining VOC reductions from cleaning materials used by offset lithographic printers and letterpress printers is to control the use of such materials by the printers through a CTG. The draft CTG recommends limiting the composite vapor pressure of offset lithographic and letterpress cleaning materials. With the CTG, the composite vapor pressure restrictions would apply to the printer regardless of the source of the cleaning materials and solvents.

Significantly, we could not impose work practices through a section 183(e) rule. Work practices, by their nature, are directed at the end-user of the product. The draft CTG recommends work practices such as keeping shop towels in closed containers. This measure alone results in significant reductions in VOC cleaning emissions, when used in conjunction with low composite vapor pressure cleaning materials. These reductions would not be possible through a section 183(e) regulation because, by statute, such regulations do not apply to the end-user. Finally, the approaches recommended in the CTG are consistent with approaches taken by States and localities for cleaning materials, and these approaches have proven effective in reducing VOC emissions.

Based on the nature of the offset lithographic printing and letterpress printing processes, the sources of significant VOC emissions from those processes, and the available strategies for reducing such emissions, the most effective means of achieving VOC emission reductions from these product categories is through controls at the point of use of the products, (*i.e.*, through controls on printers), and this can only be accomplished through a CTG. The approaches described in the draft CTG are also consistent with effective state and local VOC control strategies. These two factors alone demonstrate that a CTG will be substantially as effective as a national regulation.

2. The Product's Distribution and Place of Use and Likely VOC Emission Reductions Associated With a CTG Versus a Regulation

The factors described in the above section, taken by themselves, weigh heavily in favor of the CTG approach. The other two factors relevant to the section 183(e)(3)(C) determination only further confirm that a CTG will be substantially as effective as a national regulation for offset lithographic printing and letterpress printing products.

First, the products described above are used at commercial printing facilities in specific, identifiable locations. This stands in contrast to other consumer products, such as architectural coatings, that are widely distributed and used by innumerable small users (e.g., individual consumers in the general public). Because the VOC emissions are occurring at commercial printing facilities, implementation and enforcement of controls concerning the use of products are feasible and therefore the nature of the product's place of use further counsels in favor of the CTG approach.

Second, a CTG will achieve equal or greater emission reduction than a national rule for each source of VOC emissions from offset lithographic printing and letterpress printing. In total, the CTG will achieve greater emission reductions because, as explained above, there are certain control strategies, applicable to the end-user of the product, that achieve significant VOC reductions. In particular, a CTG will achieve a significant reduction of VOC emissions (90 percent or greater) from heatset inks through the use of control devices on dryers used in heatset web offset lithographic printing and heatset web

letterpress printing. A CTG also provides for work practices associated with cleaning materials. The VOC reductions associated with these measures could not be obtained through a national regulation because they require the implementation of measures by the end-user.

In addition, there are certain strategies that arguably could be implemented through rulemaking, but are far more effective if implemented directly at the point of use of the product. For the reasons described above, it is more effective to control the alcohol or alcohol-substitutes content of fountain solution concentrate and the composite vapor pressure of cleaning materials through a CTG, than a regulation.

Furthermore, the number of sources affected by a CTG, as compared to the number of sources in nonattainment areas does not change our conclusion that the CTG would, in total, achieve greater VOC emission reductions than a rule. Based on the April 2006 designations, we estimate that 6,700 offset lithographic printing facilities, and 2,200 letterpress printing facilities would be affected by the draft CTG. We further estimate that there are 30,500 offset lithographic printing facilities and 11,000 letterpress printing facilities located in ozone nonattainment areas. Although there is a large difference between the number of facilities affected by the CTG, as compared to the number of facilities in nonattainment areas, the facilities not covered by the CTG are predominantly small sheet-fed printing facilities that, as demonstrated above, are inherently low VOC emitters.

Upon considering the above factors in light of the facts and circumstances associated with these product categories, we propose to determine that a CTG for offset lithographic printing and letterpress printing will be substantially as effective as a national regulation.

III. Flexible Packaging Printing Materials

A. Industry Characterization

1. Source Category Description

Flexible packaging refers to any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, labels, liners, and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials. Printing, coating, laminating, and the use of adhesives, primers, and varnishes may all be performed on or in-line with a flexible packaging printing press, and these activities are included in the source category.

2. Processes, Sources of VOC Emissions, and Controls

The primary source of VOC emissions from the flexible packaging printing industry is evaporation of components of the printing inks, coatings, adhesives and cleaning materials.

About 80 percent of flexible packaging printing is performed using rotogravure processes. Gravure printing is a printing process in which an image (type and art) is etched or engraved below the surface of a plate or cylinder. Rotogravure package printing uses a wide variety of different ink systems, including solvent systems (using aromatic, aliphatic and oxygenated hydrocarbon solvent-borne inks), and waterborne inks. VOC are contained in the printing inks, coatings, adhesives and cleaning materials.

In flexographic printing, the image is raised above the printing plate, and the image carrier is made of rubber or other elastomeric materials. The major applications of flexographic printing are flexible and rigid packaging; tags and labels; newspapers, magazines, and directories; and paper towels, tissues, etc. Flexographic inks include both waterborne and solvent-based systems. Solvents used must be compatible with the rubber or polymeric plates; thus, aromatic solvents are not used. VOC are contained in the printing inks, coatings, adhesives and cleaning materials.

There are two approaches to reducing VOC emissions from the inks, coatings and adhesives used in the flexible packaging printing industry. The first approach includes improving existing capture and/or control systems or adding control systems where none are in use. The second approach, focusing on pollution prevention, is to substitute lower VOC content or VOC-free inks, coatings and adhesives for higher VOC content materials presently in use. The controls employed are influenced by the type of inks, coatings and adhesives used, the printing process being used, the substrate, and performance requirements for the end product.

Capture systems in use include combinations of dryer exhausts, floor sweeps, hoods, and total enclosures. Pressroom ventilation air can also be exhausted to a control device. Capture efficiencies can vary widely; the differences in efficiency contribute much more to the variation in overall efficiencies than the choice of control device. Control devices in use include carbon adsorbers, thermal oxidizers, and catalytic oxidizers.

Many facilities in the packaging rotogravure and flexographic printing industries use waterborne inks. These inks typically contain a small proportion of alcohols or glycol ethers which function to reduce surface tension and improve flow characteristics. Waterborne inks are being used successfully for printing on paper packaging and for printing on non-absorbent packaging substrates such as plastics, aluminum, and laminates.

Use of waterborne inks for rotogravure printing is increasing; however, problems still limit their use at press speeds above 1,000 feet per minute. Their use may require redesign of the system (e.g., changes in ink formulation, cylinder engraving, press operation, and dryer design) for rotogravure flexible packaging printing. While use of waterborne inks reduces or eliminates VOC emissions, their higher surface tension and slower drying rate continue to be obstacles to their expanded use.

There is widespread use of waterborne inks in flexographic printing. Most of these facilities have no control devices, and may have converted from solvent-borne to waterborne materials to avoid the need to install control devices to comply with VOC regulations. Flexographic printing is more easily adapted to the use of waterborne materials, and may not require redesign of the system.

Flexible packaging producers print on many different substrates within the same facility. Low-VOC inks are not available to meet all of the performance requirements of the products produced at these facilities or for all substrates in all of the colors required by some facilities.

3. State and Local Regulations

At least 34 States and several more local agencies have regulations that control VOC emissions from rotogravure and flexographic printing for flexible packaging. The majority of these agencies have adopted control levels consistent with the 1978 RACT levels of 65 percent overall control for rotogravure, 60 percent overall control for flexography, or use of inks, coatings and adhesives with less than or equal to 25 percent by volume VOC in their volatile fraction, more than 60 volume percent solids less water, or less than 0.5 kg of VOC per kg of solids. More recently issued regulations for flexible package printing operations are more stringent than the recommendations found in the 1978 CTG. These regulations have overall control efficiency requirements ranging from 66 percent to 85 percent.

B. Recommended Control Techniques

The draft CTG recommends certain control techniques for flexible packaging printing (inks, coatings and adhesives) and cleaning. The recommendations in the draft CTG apply to flexible packaging printing operations that emit at least 6.8 kg/day (15 lb/day) of VOC before consideration of control. This level of emissions has been the applicability threshold for many CTG in the past. For purposes of this threshold, emissions from all flexible packaging printing and cleaning activities associated with flexible packaging printing at a given facility are included. The only exception to this threshold relates to the control recommendations provided below for emissions from inks, coatings and adhesives, and that exception is described below.

1. Inks, Coatings and Adhesives

More recently installed presses are capable of achieving greater capture efficiencies than older presses. For presses first installed prior to March 14, 1995, the draft CTG recommends an overall capture and control efficiency of 70 percent for flexible packaging printers. Alternative ''as-applied'' ink, coating and adhesive limits of 0.5 kg of VOC/kg of solids applied (0.5 lb of VOC/lb of solids applied) or 0.10 kg of VOC/kg of materials applied (0.10 lb of VOC/lb of materials applied) are also recommended.

For presses installed on or after March 14, 1995, the draft CTG recommends an overall capture and control efficiency of 80 percent for flexible packaging printers. Alternative ''as-applied'' ink, coating and adhesive limits of 0.5 kg VOC/kg of solids applied (0.5 lb of VOC/lb of solids applied) or 0.10 kg VOC/kg of materials applied (0.10 lb of VOC/lb of materials applied) are also recommended.

The above recommended levels of control apply only to flexible packaging printing operations with potential to emit at least 25 tpy of VOC from inks, coatings and adhesives combined before consideration of controls. We are recommending the 25 tpy threshold because not all flexible packaging facilities can use low VOC content inks, coatings and adhesives, and because the limited information currently available to us suggests that add-on controls for small printers may be more costly for a given amount of emission reduction.

Based on available information, we estimate that for a press exhausting approximately 5,800 cubic feet per minute, operating 2000 hours per year, and achieving 70 percent capture efficiency, the VOC emission reduction achieved by add-on controls would range from 30 to 60 megagrams (Mg) (33 to 66 tons) per year and the cost effectiveness would range from $1,400/Mg to $3,100/Mg ($1,300/ton to 2,800/ton) depending on the average hourly solvent use rate. At lower solvent use rates, the cost per ton of emission controlled would likely be higher.

We recognize that we have limited information on small flexible packaging printing facilities and the cost of add-on controls to reduce VOCs emitted from inks, coatings and adhesives at these smaller sources. To allow us to assess the cost of controlling emissions from inks, coatings and adhesives at small flexible packaging printing facilities and the appropriateness of the 25 tpy threshold for recommending control of these emissions, we request information on the mass of VOC emissions from inks, coatings and adhesives before control, dryer exhaust rates, press utilization rates and other relevant operating parameters for these smaller facilities. We would also welcome information on the experience of smaller facilities in controlling these emissions, including any alternative control approaches, and the cost of such controls.

2. Work Practices for Cleaning Materials

The draft CTG recommends work practice requirements to ensure that all cleaning materials are stored in closed containers; spills are minimized; cleaning materials are conveyed from one location to another in closed containers or pipes; and emissions of VOC are minimized during cleaning of equipment. The draft CTG also recommends that used shop towels be stored in closed containers.

C. Impacts of Recommended Control Techniques

EPA estimates that there are a total of 219 facilities located in ozone nonattainment areas (based on April 2006 designations). Based on VOC emissions data, EPA estimates that there are approximately 100 facilities in ozone nonattainment areas that would be affected based on the 6.8 kg/day (15 lb/day) VOC emissions applicability threshold.

Nonattainment area VOC emissions (based on April 2006 designations) are estimated to range from 8,636 to 16,364 Mg/yr (9,500 to 18,000 tpy). Many facilities located in ozone nonattainment areas are already meeting the control levels recommended in the draft CTG. These facilities may be using capture and control systems or low VOC content inks, coatings and adhesives. The costs for facilities using higher VOC materials that are not currently controlled and will be subject to RACT for the first time will vary depending on the flow rate, hourly solvent use rate, and operating hours. Although we do not have sufficient information for the industry as a whole to estimate the costs of the recommended control approaches, we have information on certain sources from which we can estimate the likely emissions reductions and costs for a typical source subject to control for the first time.

As noted above, on a relatively small flexible packaging press exhausting approximately 5,800 cubic feet per minute, operating 2000 hours per year, and achieving 70 percent capture efficiency, we estimate the VOC emission reduction to range from 30 to 60 megagrams (Mg) (33 to 66 tons) per year and the cost effectiveness to range from $1,400/Mg to $3,100/Mg ($1,300/ton to $2,800/ton) depending on the average hourly solvent use rate. Increasing the hourly solvent use rate, annual operating hours, or capture efficiency of this size press would increase the annual VOC emission reduction and improve the cost effectiveness. Larger presses with proportionately larger hourly solvent use rates would also have larger annual VOC emission reductions and better cost effectiveness than smaller presses.

D. Considerations in Determining Whether a CTG Will Be Substantially as Effective as a Regulation

In determining whether to do a national rule or a CTG for the flexible packaging printing materials category, we evaluated the factors noted above in Section I.D of this notice in light of the specific facts and circumstances associated with this product category. Given the nature of the flexible packaging printing process, the sources of VOC emissions from this process and the available strategies for reducing VOC emissions from this process, we propose to determine that a CTG will be substantially as effective as a rule in achieving VOC emission reductions in ozone nonattainment areas from the flexible packaging printing materials product category.

1. The Most Effective Entity To Target for VOC Reductions and Consistency With State and Local VOC Strategies

To evaluate the most effective entity to target for VOC reductions, it is important to first identify the primary sources of VOC emissions. There are two main sources of VOC emissions from flexible package printing: (1) Evaporation of VOC from inks, coatings,

and adhesives; and (2) evaporation of VOC from cleaning materials. We address each of these sources of VOC emissions, in turn, below, as we discuss the CTG versus regulation approach.

a. Inks, Coatings, and Adhesives

While there is already significant use of low-VOC inks, coatings and adhesives, not all flexible packaging printing can be done with low-VOC content materials. In addition, in some cases where low-VOC content materials could be used for some or all of the products produced by a particular printer, there can be significant equipment costs associated with switching to low-VOC content materials. For example, in order to switch from solvent-borne materials to waterborne materials, a rotogravure printer would need to re-engrave all of its rotogravure cylinders. In other cases significant modifications may need to be made to dryers.

A national rule could, in theory, limit the as-sold VOC content of inks, coatings and adhesives used for specific purposes in flexible packaging printing. This would in essence be specifying which print work must be done with waterborne or other low-VOC content materials and which print work may be done with solvent-borne materials. During the development of the national emission standard for hazardous air pollutants for the printing and publishing industry, we identified many inks, coatings and adhesives with low hazardous air pollutant (HAP) content; however, we were unable to identify specific print work that could always be performed with low HAP content materials. Similarly, given the wide variety of flexible packaging products; the wide variety of combinations of substrates, inks, coatings and adhesives used to make these products; the wide variety of products that may be printed on an individual press; and the wide variation in the capabilities of individual presses, we do not believe that we would be able to identify specific print work that could always be performed with waterborne or other low-VOC content materials. As a result, we do not believe we could create an effective national rule which specified which print work must be done with waterborne or other low-VOC content materials and which print work may be done with solvent-borne materials.

Alternatively, a national rule could contain limits for the as-sold VOC content of broad categories of flexible packaging printing inks, coatings, and adhesives, but given the nature of the flexible package printing process, this would result in little, if any, reduction in VOC emissions. For example, a national rule could categorize inks by their chemistry into waterborne inks, other low-VOC content inks, and solvent-borne inks and set VOC content limits for each category. Such a rule would not restrict the type of work that could be conducted with each type of ink. Structuring a rule in this fashion would not result in significant reductions in VOC emissions because solvent-borne inks, which are the primary source of VOC emissions, would still be allowed to have high VOC content, and a national rule would not require printers to use add-on controls in conjunction with these high VOC content materials. It is more effective to address the emissions associated with solvent-borne inks at the point of use through a CTG.

Indeed, control devices, such as thermal oxidizers, catalytic oxidizers, or carbon adsorbers, can achieve significant reductions in VOC emissions from high VOC content inks, coatings and adhesives. Existing State and local regulations that address flexible packaging printing authorize the use of high VOC content materials in conjunction with control devices or the use equivalent low-VOC content materials.

We could not require control devices at printers through a national rule, because, pursuant to CAA section 183(e)(1)(C) and (e)(3)(A), the regulated entities subject to a national rule would be the ink, coating and adhesive manufacturers and suppliers, not the printers. The draft CTG applies to printers, as the end users of the inks, coatings and adhesives, and specifically recommends limiting emissions by requiring printers to install and operate control devices or to use equivalent low-VOC content materials. Given the significant reductions achievable through use of add-on control devices, the most effective entity to regulate to address VOC emissions associated with flexible packaging inks, coatings and adhesives is the printer.

b. Cleaning Materials

There are two primary means to control VOC emissions associated with the cleaning materials used in the flexible packaging printing process: (1) Limiting the composite vapor pressure of the cleaning materials and (2) implementing work practices governing the use of the product.

A national rule affecting flexible packaging printing cleaning material manufacturers that limits the composite vapor pressure of VOC in the cleaning materials sold would suffer from the same deficiencies noted above with regard lithographic printing fountain solutions and lithographic printing and letterpress printing cleaning materials. Specifically, although flexible packaging printers may purchase cleaning materials from vendors serving their respective industry, nothing in a national rule governing manufacturers would preclude them from purchasing bulk solvents or other multipurpose cleaning materials from other vendors. The general availability of bulk solvents or multipurpose cleaning materials from vendors that would not be subject to the regulation would directly undermine the effectiveness of the regulation.

A national rule also could, in theory, limit the composite vapor pressure of all cleaning materials and all solvents sold regardless of specified end use, which would ensure that only low composite vapor pressure materials are available for flexible packaging printing. Such an approach is unreasonable and impractical. Cleaning materials and solvents are sold for multiple different commercial and industrial purposes. Reducing the vapor pressure of all cleaning materials and solvents merely to achieve VOC emission reduction from flexible packaging printing, would preclude the use of such materials in many important, legitimate contexts.

The more effective approach for obtaining VOC reductions from cleaning materials used by flexible packaging printers is to control the use of such materials by the printers through a CTG. The draft CTG recommends limiting the composite vapor pressure of flexible packaging cleaning materials. With the CTG, the composite vapor pressure restrictions would apply to the printer regardless of the source of the cleaning materials and solvents.

Significantly, we could not impose work practices through a CAA section 183(e) rule. Work practices, by their nature, are directed at the end-user of the product. The draft CTG recommends work practices such as keeping shop towels in closed containers. This measure alone results in significant reductions in VOC cleaning emissions, when used in conjunction with low composite vapor pressure cleaning materials. These reductions would not be possible through a CAA section 183(e) regulation because, by statute, such regulations do not apply to the end-user. Finally, the approaches recommended in the CTG are consistent with approaches taken by States and localities for cleaning materials, and these approaches have proven effective in reducing VOC emissions.

Based on the nature of the flexible packaging printing process, the sources of significant VOC emissions from this

process, and the available strategies for reducing such emissions, the most effective means of achieving VOC emission reductions from this product category is through controls at the point of use of the products, (*i.e.*, through controls on printers), and this can only be accomplished through a CTG. The approaches described in the draft CTG are also consistent with effective state and local VOC control strategies. These two factors alone demonstrate that a CTG will be substantially as effective as a national regulation.

2. The Product's Distribution and Place of Use and Likely VOC Emission Reductions Associated With a CTG Versus a Regulation

The factors described in the above section, taken by themselves, weigh heavily in favor of the CTG approach. The other two factors relevant to the CAA section 183(e)(3)(C) determination only further confirm that a CTG will be substantially as effective as a national regulation for flexible packaging printing products.

First, the products described above are used at commercial printing facilities in specific, identifiable locations. This stands in contrast to other consumer products, such as architectural coatings, that are widely distributed and used by innumerable small users (e.g., individual consumers in the general public). Because the VOC emissions are occurring at commercial printing facilities, implementation and enforcement of controls concerning the use of products are feasible and therefore the nature of the product's place of use further counsels in favor of the CTG approach.

Second, as described above, a CTG will achieve equal or greater emission reductions than a national rule for each source of VOC emissions from flexible packaging printing. In total, the CTG will achieve greater emission reductions because, as explained above, there are certain control strategies, applicable to the end-user of the product, that achieve significant VOC reductions. In particular, the only mechanism by which to achieve the significant VOC reductions associated with installing add-on controls, which is one of the recommended approaches for addressing VOC emissions from inks, coatings, and adhesives, is through a CTG. The VOC reductions associated with work practices similarly can only be achieved through a CTG as it affects the end-user. Although a regulation could impose low VOC content restrictions for inks, coatings, and adhesives, and vapor pressure limits for cleaning materials, we believe, for the reasons described above, that it is far more effective to control these materials at the point of use, rather than the point of manufacture.

Furthermore, the number of sources affected by a CTG, as compared to the number of sources in nonattainment areas does not change our conclusion that the CTG would, in total, achieve greater VOC emission reductions than a rule. Based on the April 2006 designations, we estimate that approximately 100 flexible packaging printing facilities in ozone nonattainment areas would meet the applicability criteria in the CTG (i.e., 6.8 kg/day (15 lb/day)) VOC emissions. We further estimate that there are 219 flexible packaging printing facilities located in ozone nonattainment areas. Although the CTG would apply only to about half of the facilities in ozone nonattainment areas, the facilities that are not covered by the CTG are, by themselves, low VOC emitters in that they emit less than 15 lb VOC per day (which is less than 2.5 tpy).

Upon considering the above factors in light of the facts and circumstances associated with this product category, we propose to determine that a CTG for flexible packaging printing will be substantially as effective as a national regulation.

IV. Flat Wood Paneling Coatings

A. Industry Characterization

1. Source Category Description

Flat wood paneling coatings include, but are not limited to, paints, stains, sealers, topcoats, basecoats, primers, enamels, inks and adhesives used in the manufacture of flat wood paneling. The coatings provide a protective or decorative layer to paneling products used in interior and exterior construction of residential, commercial and institutional buildings. These paneling products can be classified into three main product types: decorative interior panels, exterior siding, and tileboard.

2. Processes, Sources of VOC Emissions, and Controls

The primary VOC emissions from flat wood paneling surface coating operations occur during coating application and drying/curing of the coatings. The remaining emissions are primarily from mixing and/or thinning and cleaning operations. In most cases, VOC emissions from surface preparation, storage, handling, and waste/wastewater operations are relatively small.

After being coated by any of the conventional wet coating operations (such as spray coating, roll coating, or dip coating), the flat wood paneling products are cured using heated dryers. This step removes any remaining volatiles from the coating so that the surface of the flat wood paneling product meets the hardness, durability, and appearance requirements of the customer.

The industry currently uses primarily waterborne coatings, although some products (e.g., tileboard and fire-resistant paneling) still require solvent-borne coatings to provide adequate water, weather, and fire resistance. Quick drying time is another important reason why manufacturers use solvent-borne coatings, especially when fast line speeds are used. Solvent-borne coatings contain higher amounts of VOC materials so they evaporate more readily than water and the products take less time to cure in the ovens. Curing time is an important variable because the applied coating must be dry, hard, and cool prior to packaging, otherwise the products have the potential to stick together when stacked, causing defects or rejected material.

Decorative interior panels require multiple coating layers and coating steps. Production speeds of 30 to 35 boards per minute require the use of solvents that evaporate without leaving cure blisters and without leaving residual solvent in the coating film or substrate. Exterior siding products must have coatings able to withstand extreme and long-term weather conditions and resist ultra-violet radiation. These performance requirements impact the amount of VOC emitted from the coating of exterior siding. Tileboard is a premium interior wall paneling product made of hardboard that is used in high moisture areas of the home such as kitchens and bathrooms. Tileboard has more stringent product performance requirements compared to standard interior wall paneling.

Common techniques to reduce emissions include use of low-VOC coatings and operation of add-on control devices where low-VOC materials cannot be used due to performance requirements calling for solvent-borne coatings. In addition, emissions from cleaning operations can be reduced through use of work practices such as keeping cleaning solvents and shop towels in covered containers.

3. State and Local Regulations

At least 28 State and local jurisdictions have regulations that control VOC emissions from surface coating operations that include flat wood paneling. Most of these regulations are general surface coating

rules; a few are specific to flat wood paneling. In addition to the State and local requirements, there are two previous EPA actions that affect surface coating operations for flat wood paneling. In 1978, EPA issued a CTG document (EPA–450/2–78–032) that provided RACT recommendations for controlling VOC emissions from this industry. In 2003, EPA promulgated national emission standards for hazardous air pollutants (NESHAP) covering surface coating of wood building products. See 68 FR 31746 (May 28, 2003). The 1978 CTG and the 2003 NESHAP are further discussed in the current draft CTG document.

Almost all of the jurisdictions that specifically address flat wood paneling have based their rules on the old 1978 CTG. However, there are two jurisdictions in California that have requirements specific to flat wood paneling that are more current than the 1978 CTG. In the Placer County California Air Pollution Control District, VOC emissions from flat wood paneling operations in a nonattainment area are limited to 250 g VOC/l (2.1 lb VOC/gal) of coating (excluding water) or the overall control device efficiency must be at least 90 percent.

The California South Coast AQMD defines flat wood paneling as ''interior wood panels and exterior wood siding, which include, by way of illustration and not limitation, redwood, cedar or plywood stocks, plywood panels, particle boards, composition hard boards, and any other panels or siding constructed of solid wood or a wood-containing product.'' The emissions limit established by the South Coast rule is identical to the emission limit established by Placer County, California and also covers exterior siding, which the Placer County rule does not.

B. Recommended Control Techniques

The draft CTG provides flexibility by recommending either low-VOC materials or, as an option, add-on controls as an alternative to low-VOC materials. The low-VOC materials recommendations include an emissions limit of 250 g VOC/l (2.1 lb VOC/gal) of material (minus water). An equivalent limit, expressed as units of weight of VOC per volume of solids in all coatings would be 350 grams of VOC per liter solids (2.9 lb of VOC per gal of solids). Or, alternatively, a facility could choose to use add-on control equipment to meet an overall control efficiency of 90 percent. These control options would apply to surface coatings, inks, and adhesives applied to all types of flat wood paneling.

The draft CTG also recommends work practice standards. The work practice plan must include steps to ensure that VOC emissions are minimized from mixing operations, storage tanks and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Examples of work practice standards include: Storing all VOC coatings, thinners, and cleaning materials in closed containers, minimizing spills of VOC containing coatings, thinners, cleaning up spills immediately, conveying any coatings, thinners, and cleaning materials in closed containers or pipes, closing mixing vessels which contain VOC coatings and other materials except when specifically in use, and minimizing emissions of VOC during cleaning of storage, mixing, and conveying equipment.

C. Impacts of Recommended Control Techniques

EPA estimates that there are a total of 24 flat wood paneling facilities located in ozone nonattainment areas (based on April 2006 designations). Based on VOC emissions data, all of the 24 facilities in ozone nonattainment areas would be affected considering the 6.8 kg/day (15 lb/day) VOC emissions applicability threshold. This level of emissions has been the applicability threshold for many CTG in the past. For purposes of this threshold, aggregate emissions from all flat wood paneling coating operations and cleaning activities associated with flat wood paneling coating at a given facility are included.

These facilities emit about 4,400 Mg (4,000 tons) of VOC per year. The cost effectiveness estimates vary according to the type of flat wood paneling. Based on studies conducted as part of development of the Placer County and South Coast regulations, the cost effectiveness is estimated at $4,400 per ton of VOC for exterior siding and $1,900 per ton of VOC for interior paneling and tileboard. Due to the higher estimated cost for a given amount of emission reductions from exterior siding, and because exterior siding is not covered by the 1978 CTG and by several current State rules based on that CTG, EPA solicits comments on whether it is appropriate to exclude exterior siding from applicability of the draft CTG. As discussed above, the draft CTG recommends three alternatives, plus work practices, for reducing VOC emissions from these operations. Two of the alternatives focus on use of low-VOC coatings that are readily available. For those facilities that choose to use high-VOC coatings, they may choose to employ the third alternative, the use of add-on controls. From information in the NEI database, there is no indication that any of the 24 facilities currently have add-on controls, but may be using low-VOC coatings for compliance with any existing State or local requirements.

D. Considerations in Determining Whether a CTG Will Be Substantially as Effective as a Regulation

In determining whether to develop a national rule or a CTG for the product category of flat wood paneling coatings under CAA section 183(e)(3)(C), we analyzed the four factors identified above in Section I.D in light of the specific facts and circumstances associated with this product category. Based on that analysis, we propose to determine that a CTG will be substantially as effective as a rule in achieving VOC emission reductions in ozone nonattainment areas from flat wood paneling coatings.

This section is divided into two parts, each of which addresses two of the factors relevant to the CAA section 183(e)(1)(C) determination. In the first part, we determine that the most effective means of achieving VOC emission reductions in this category is through controls at the point of use of the product, (i.e., through controls on facilities that apply surface coatings to flat wood paneling products), and this can only be accomplished through a CTG. We further explain that the approaches in the draft CTG are consistent with existing effective state and local VOC strategies. In the second part, we discuss how the distribution and place of use of the products in this category also support the use of a CTG. We further explain that there are control approaches for this category that result in significant VOC emission reductions and that such reductions could only be obtained by controlling the use of the product through a CTG. Such reductions could not be obtained through a regulation under CAA section 183(e) because the controls affect the end-user, which is not a regulated entity under CAA section 183(e)(1)(C). Accordingly, for these reasons and the reasons described more fully below, we believe that a CTG will achieve much greater VOC emission reductions than a rule for this category.

1. The Most Effective Entity To Target for VOC Reductions and Consistency With State and Local VOC Strategies

To evaluate the most effective entity to target for VOC reductions, it is important to first identify the primary sources of VOC emissions. There are two main sources of VOC emissions from flat wood paneling coating: (1)

Evaporation of VOC from coatings and adhesives; and (2) evaporation of VOC from cleaning materials. We address each of these sources of VOC emissions, in turn, below, as we discuss the CTG versus regulation approach.

a. Coatings and Adhesives

The industry currently uses primarily waterborne coatings, although some products (e.g., tileboard and fire-resistant paneling) still require solvent-borne coatings to provide adequate water, weather, and fire resistance. Quick drying time is another important reason why manufacturers use solvent-borne coatings, especially when fast line speeds are used. A national rule could contain limits for the as-sold VOC content of coatings and adhesives, but given the nature of the flat wood paneling coating process, this would result, in little, if any, reduction in VOC emissions. A national rule could, for example, set lower VOC content limits for waterborne and other low-VOC content materials and higher VOC content limits for solvent-borne materials without specifying which flat wood paneling products must be coated with each type of material. This rule structure would leave facilities free to choose which type of material to use. Further, many coatings and adhesives used in flat wood paneling coating are not identified by the supplier specifically as flat wood paneling coatings and would fall outside of the scope of such a national rule. Thus, such a rule would not compel anyone to use lower VOC content materials and would achieve little, if any, VOC emission reduction.

Control devices, such as thermal oxidizers, catalytic oxidizers, or carbon adsorbers, can achieve a significant reduction in VOC emissions from high VOC content materials. In light of the significant reductions in VOC emissions obtained with such devices, existing State and local regulations that address flat wood paneling coating allow the use of high VOC content materials in conjunction with control devices. These regulations require the use of such controls or the use of equivalent low-VOC content materials. In addition, the 2003 NESHAP contains a compliance option that allows the facility to lower the emission rate by using add-on controls.

We could not require such control devices at flat wood paneling facilities through a national rule, because, pursuant to CAA section 183(e)(1)(C) and (e)(3)(A), the regulated entities subject to a national rule would be the coating and adhesive manufacturers and suppliers, not the flat wood paneling facilities. The draft CTG applies to these facilities, as the end users of the coatings and adhesives, and specifically recommends limiting emissions by the use of low-VOC coatings or to control emissions through the operation of control devices. Given the significant reductions achievable through available use of add-on control devices, the most effective entity to regulate to address VOC emissions associated with flat wood paneling coatings is the facility using the coatings.

b. Cleaning Materials

There are two primary means to control VOC emissions associated with the cleaning materials used in the flat wood paneling coating process: (1) Limiting the VOC content of the cleaning materials, and (2) implementing work practices governing the use of the product.

A national rule affecting solvent manufacturers that supply cleaning materials to the flat wood paneling industry that limits the VOC content of VOC in the cleaning materials sold would suffer from the same deficiencies noted above with regard to lithographic printing fountain solutions, lithographic printing and letterpress printing cleaning materials, and flexible packaging printing cleaning materials. Specifically, although flat wood paneling coaters may purchase cleaning materials from vendors serving their respective industry, nothing in a national rule governing manufacturers would preclude them from purchasing bulk solvents or other multipurpose cleaning materials from other vendors. The general availability of bulk solvents or multipurpose cleaning materials from vendors that would not be subject to the regulation would directly undermine the effectiveness of the regulation.

A national rule also could, in theory, limit the VOC content of all cleaning materials and all solvents sold regardless of specified end use, which would ensure that only low-VOC materials are available to the flat wood paneling coating industry. Such an approach is unreasonable and impractical. Cleaning materials and solvents are sold for multiple different commercial and industrial purposes. Reducing the vapor pressure of all cleaning materials and solvents merely to achieve VOC emission reductions from the flat wood paneling coating industry would preclude the use of such materials in many important, legitimate contexts.

The more effective approach for obtaining VOC reductions from cleaning materials used by flat wood paneling coaters is to control the use of such materials by the coaters through a CTG. Significantly, we could not impose work practices through a CAA section 183(e) rule. Work practices, by their nature, are directed at the end-user of the product. The draft CTG recommends work practices such as keeping solvents and shop towels in closed containers. This measure alone results in significant reductions in VOC cleaning emissions. These reductions would not be possible through a CAA section 183(e) regulation because, by statute, such regulations do not apply to the end-user. Finally, the approaches recommended in the CTG are consistent with approaches taken by States and localities for cleaning materials, and these approaches have proven effective in reducing VOC emissions.

Based on the nature of the flat wood paneling coating process, the sources of significant VOC emissions from this process, and the available strategies for reducing such emissions, the most effective means of achieving VOC emission reductions from this product category is through controls at the point of use of the products, (i.e., through controls on flat wood paneling coaters), and this can only be accomplished through a CTG. The approaches described in the draft CTG are also consistent with effective state and local VOC control strategies. These two factors alone demonstrate that a CTG will be substantially as effective as a national regulation.

2. The Product's Distribution and Place of Use and Likely VOC Emission Reductions Associated With a CTG Versus a Regulation

The factors described in the above section, taken by themselves, weigh heavily in favor of the CTG approach. The other two factors relevant to the CAA section 183(e)(3)(C) determination only further confirm that a CTG will be substantially as effective as a national regulation for flat wood paneling coatings.

First, the products described above are used at commercial facilities in specific, identifiable locations. This stands in contrast to other consumer products, such as architectural coatings, that are widely distributed and used by innumerable small users (e.g., individual consumers in the general public). Because the VOC emissions are occurring at commercial manufacturing facilities, implementation and enforcement of controls concerning the use of products are feasible and therefore the nature of the product's place of use further counsels in favor of the CTG approach.

Second, as described above, a CTG will achieve equal or greater emission reduction than a national rule for each source of VOC emissions from flat wood paneling coating. In total, a CTG will achieve significantly more emission reduction than a national rule for this category. A CTG will achieve a significant greater emission reductions because, as explained above, there are certain control strategies, applicable to the end-user of the product, that achieve significant emission reductions. In particular, a CTG will achieve a significant reduction of VOC emissions from coatings and adhesives through the use of control devices. A CTG provides for work practices associated with cleaning materials. The VOC reductions associated with these measures could not be obtained through a national regulation, because they require the implementation of measures by the end-user.

In addition, there are certain strategies that arguably could be implemented through rulemaking, but are far more effective if implemented directly at the point of use of the product. For the reasons stated above it is more effective to control the VOC content of coatings and adhesives through a CTG than through a regulation

Upon considering the above factors in light of the facts and circumstances associated with this product category, we propose to determine that a CTG for flat wood paneling coatings will be substantially as effective as a national regulation.

Upon considering the above factors in light of the facts and circumstances associated with this product category, we propose to determine that a CTG for flat wood paneling coatings will be substantially as effective as a national regulation.

V. Industrial Cleaning Solvents

A. Industry Characterization

1. Source Category Description

This category of consumer and commercial products includes the industrial cleaning solvents used by many industries. This category includes a variety of products used to remove contaminants such as adhesives, inks, paint, dirt, soil, oil, and grease from parts, products, tools, machinery, equipment, vessels, floors, walls, and other production related work areas. Cleaning operations are performed for a variety of reasons including safety, operability, and to avoid contamination of the products being manufactured or repaired at the facility. The cleaning solvents used in these operations are, in many cases, generally available bulk solvents that are used for a multitude of applications not limited to cleaning. For example, naphtha may be used as a cleaning solvent, as a paint thinner, or as an ingredient used in the manufacture of paint.

2. Sources of VOC Emissions and Controls

In general, VOC emissions occur from industrial cleaning solvents through evaporation during cleaning activities such as wiping, flushing, and brushing, as well as from storage and disposal of used shop towels and solvent. Because a portion of all solvents evaporate during use, such solvent-based cleaning materials can result in large amounts of emissions of VOC.

In 1994, EPA completed a study of industrial cleaning solvents that characterized cleaning operations carried out within six focus industries (automotive, electrical equipment, magnetic tape, furniture, packaging, and photographic supplies) to evaluate sources of evaporative emissions from VOC solvents used as cleaning materials. We believe that the range of cleaning activities performed in these industries provided a good variety of cleaning operations for the study, and that the information obtained relevant to VOC emission sources and possible control techniques can be applied to virtually any industry. During the study, EPA collected information on emissions from industrial cleaning solvents used in approximately 300 individual cleaning operations across the six focus industries. EPA classified these operations into nine ''unit operations'' (UO). We believe that any given industrial cleaning activity would fall into one or more of these UO: (1) Spray gun cleaning; (2) spray booth cleaning; (3) large manufactured components cleaning; (4) small manufactured components cleaning; (5) parts cleaning; (6) equipment cleaning; (7) floor cleaning; (8) line cleaning; and (9) tank cleaning. The purpose of identifying these UO is to assist State and local agencies in identifying the sources of VOC emissions from cleaning activities and to provide a structure for developing and applying control techniques to mitigate VOC emissions from industrial cleaning solvents used in these UO.

In February 1994, EPA published an Alternative Control Techniques (ACT) document (EPA–453/R–94–015) to provide information to State and local agencies on sources and various means of controlling VOC emissions from industrial cleaning operations. The ACT document identified the cleaning UO listed above and presented techniques available to reduce solvent losses, including the anticipated costs of control and potential for emissions reductions for these options. The ACT document also provided a quantitative overview of cleaning solvents used and a model solvent management system for accounting and tracking solvent usage. The model solvent management system was provided as a tool for facilities to use in tracking their solvent usage. The ACT document also provided a methodology for calculating emissions in a consistent way.

Although the industrial cleaning solvent product category includes a variety of different products with differing VOC contents, and although these products are used in different ways by a wide range of industries, we believe that there are two basic approaches to achieve VOC emission reductions. First, the users of the products can control emissions through work practices targeted at the activities and sources of emissions specific to the user's industry (e.g., keeping solvent containers covered, properly storing and disposing of used shop towels and solvent, etc.). Second, users can also reduce overall VOC emissions through solvent substitution (*e.g.*, use of low-VOC, no-VOC, or low-vapor pressure solvents). Theoretically, solvent substitution could be achieved at the point of manufacture or at the point of use, but in practice it is usually the user who selects the solvent or mixture of solvents to use in the various industrial cleaning operations throughout a facility. Either individually or in tandem, these two general approaches are effective strategies to achieve significant emission reductions from this product category, notwithstanding the variation in the products, their users, and their specific uses.

3. State and Local Regulations

Many State and local agencies, including a number of the California Air Quality Management Districts (AQMDs), have developed strategies for reducing VOC emissions from industrial cleaning solvents. Typically, these strategies include both work practices governing the use of the products and VOC limits governing the VOC content of the products. A table identifying and summarizing some of these existing State and local measures is included in the draft CTG document for this product category.

To identify potential control recommendations for the draft CTG, EPA reviewed the existing State and local regulations governing VOC emissions from this product category. The review indicated that the

regulations in three of the California AQMDs (South Coast, Bay Area, and Sacramento) are good models to evaluate, because these rules are consistent with each other in format and approach, the technical information developed to support these regulations is readily available, and these regulations are more current than those of other jurisdictions. Additionally, several case studies were available from the California AQMDs pertaining to their rules that help illustrate how specific facilities achieved VOC reductions and at what cost. Moreover, many other State and local agencies either have, or are considering, using the current regulations from the California AQMDs as models for the format and content their own control strategies. If the California AQMD strategies are effective, EPA believes that there can be a benefit to extending these measures to other nonattainment areas and maintaining nationwide consistency, as appropriate.

The regulations adopted in the California AQMDs all have requirements for both work practices and VOC content limits for solvent cleaning materials. A comparison of the various AQMD regulations governing VOC emissions from industrial cleaning solvents indicates that the work practice provisions are similar and require product users to implement generally accepted practices that have been shown to be effective in mitigating evaporative losses from solvent storage, handling, and disposal activities. These work practices are further discussed in the draft CTG and in section B below.

Although the work practice requirements are similar among the AQMDs, the VOC content limits and rule applicability differ somewhat from District to District. For example, South Coast AQMD Rule 1171 (2005) has a ''general use'' VOC limit of 25 grams VOC per liter of cleaning material that applies to most industries. In cases where water based cleaners or low-VOC solvent cleaners cannot be used, however, South Coast AQMD allows higher limits for a number of specific industries as provided for in section 1171(c) of their rule.

By comparison, Bay Area AQMD Regulation 8, Rule 4, provides for a ''general use'' limit of 50 grams VOC per liter of cleaning material, unless emissions are controlled by an emission control system with an overall abatement efficiency of at least 85 percent. The Bay Area rule exempts relatively few specific operations (e.g., electrical apparatus components, electronic components, precision optics, research and development laboratories, etc.) from the ''general use'' limit (see Bay Area AQMD's section 8–4–116). In addition, the Bay Area rule exempts cleaning operations subject to other specific Bay Area AQMD rules. There are 18 such exemptions listed in Bay Area AQMD's section 8–4–117 (e.g., architectural coating, light and medium duty motor vehicle assembly plants, plastic parts and products, etc.).

EPA's review of existing and State and local approaches to reduce VOC emissions from this product category indicates that strategies that include both work practices and VOC content limits can be effective and should be the basis for a CTG under CAA section 183(e).

B. Recommended Control Techniques

The following sections describe recommendations EPA is providing in the draft CTG document for industrial cleaning solvents, including a discussion of the recommended control measures and a description of industries to which these recommendations apply. These recommendations are discussed in more detail in the draft CTG document, which also incorporates the entire 1994 ACT document.

1. Control Measures

Based on our analysis of State and local requirements, primarily the California AQMD measures, the draft CTG recommends both work practices and a generally applicable VOC content limit for most operations modeled after the Bay Area AQMD rule.

a. Work Practices

The draft CTG recommends practices similar to those required by the California AQMDs. Specifically, these are: (1) Covering open containers and used applicators; (2) minimizing air circulation around cleaning operations; (3) properly disposing of used solvent and shop towels; and (4) implementing equipment practices that minimize emissions (e.g., keeping parts cleaners covered, maintenance of cleaning equipment to repair solvent leaks, etc.).

b. VOC Content Limit

The draft CTG recommends a generally applicable VOC content limit of 50 grams VOC per liter (0.42 1b/gal) of cleaning material, unless emissions are controlled by an emission control system with an overall abatement efficiency of at least 85 percent. This limit is modeled on the ''general use'' category of the Bay Area AQMD solvent cleaning regulations, taking into account the specific exclusions provided for in the Bay Area AQMD rule and described earlier. In addition to the Bay Area exclusions, and as discussed earlier, the more stringent South Coast AQMD ''general use'' limit is accompanied by higher limits for several individual operations (e.g., cleaning of ultraviolet ink application equipment, screen printing, cleaning of coating application equipment, etc.). When developing RACT measures for industrial cleaning operations, we suggest that State and local agencies consider the specific industries and operations in their jurisdictions and the individual requirements of those operations and tailor their rules to those specific scenarios accordingly. Furthermore, in considering existing cleaning requirements as bases for specific exemptions from their general industrial cleaning solvents rules, State and local agencies should take into account how current those measures are. EPA believes that more recent rules are likely to be more effective than older, possibly outdated, rules. We remind the States that the ultimate determination of whether any specific State or local measures meet any applicable RACT requirement will occur during the notice and comment rulemaking process associated with EPA action on SIP submissions.

c. Alternative Vapor Pressure Limit

In addition to the VOC content limit recommended here, EPA solicits comment on possible use of a composite vapor pressure limit, for example, 8 millimeters of mercury (mmHg) at 20 degrees Celsius, as (1) a replacement for the 50 g/l VOC content limit entirely; or (2) an alternative limit that may be used in lieu of the 50 g/l VOC content limit for specific operations as determined by the State or local agency.

EPA is considering this option because, historically, some State and local agencies have specified composite vapor pressure limits in their cleaning requirements. For example some States (e.g., Illinois, Connecticut, New York, etc.) limit solvents used in cold cleaning to 1.0 mmHg. California's Ventura County Air Pollution Control District allows a composite vapor pressure of 33 mmHg for solvents used for cleaning of coating application equipment and other cleanup of uncured coatings, adhesives, inks, and resins and for cleaning of electronic and electrical components, medical devices, and aerospace components.

2. Applicability

In the draft CTG, EPA recommends that, in general, these measures should have broad applicability to any industrial cleaning operations that have VOC emissions of at least 6.8 kg/day (15

lb/day), before controls. This level of emissions has been the applicability threshold for many CTG in the past. Furthermore, it is consistent with the intent of CAA section 183(e) to address individually small uses of consumer and commercial products that, in the aggregate, are significant sources of VOC emissions. We recommend that, for purposes of determining this threshold, aggregate emissions from all solvent cleaning activities associated with covered operations at a given facility are included. As described above, we also recommend that specific industry category exclusions, similar to the ones provided for in the Bay Area and South Coast rules but tailored to the States'' individual situations, accompany the applicability threshold.

In addition to the exclusions a State or local agency may specify as a result of the existence of effective measures that address cleaning operations associated with specific source categories within its jurisdiction, we recommend that the States exclude from applicability those cleaning operations in the following categories listed for regulation under CAA section 183(e): Aerospace coatings, wood furniture coatings, shipbuilding and repair coatings, flexible packaging printing materials, lithographic printing materials, letterpress printing materials, flat wood paneling coatings, large appliance coatings, metal furniture coatings, paper film and foil coating, plastic parts coatings, miscellaneous metals parts coatings, fiberglass boat manufacturing materials, miscellaneous industrial adhesives, and auto and light-duty truck assembly coatings.[11] For three of these product categories (i.e., aerospace coatings, wood furniture coatings, and shipbuilding and repair coatings), EPA has already issued CTGs that address cleaning operations. For the remaining categories, EPA intends to include control measures for cleaning associated with these categories if the Agency determines that a CTG is appropriate for the respective categories.

C. Impacts of Recommended Control Techniques

EPA estimates that there are approximately 2,550 facilities in ozone nonattainment areas that would be affected by the draft CTG. These facilities had emissions that exceed the emission threshold of 6.8 kg (15 1b) of VOC per day. Total aggregate VOC emissions from solvent cleaning operations from these sources are approximately 64,000 Mg/yr (71,000 tpy). EPA used studies published by the Bay Area AQMD to estimate the cost of compliance for the measures recommended in the draft CTG. According to these estimates, EPA believes that affected sources may either incur minimal additional costs or realize a savings on a case-by-case basis, depending primarily on facts such as how much they currently spend to operate high-VOC content solvent-based parts cleaners, and the cost of organic solvent disposal.

The Bay Area AQMD studies indicate that replacing high-VOC cleaning materials with low-VOC, water-based cleaning materials, for applications in which these materials are similar in effectiveness to high-VOC materials, results in a cost savings. The CTG for industrial cleaning solvents is guidance for the States. Although States can adopt the recommendations in the CTG, they may choose not to follow those recommendations and instead adopt other technically-sound approaches that meet the requirements of RACT in the CAA and EPA's implementing regulations. Accordingly, there is necessarily some uncertainty in any prediction of costs and emission impacts associated with the recommendations in the CTG. Nevertheless, assuming that States address the VOC emissions from this product category in accordance with the recommendations in the CTG or comparable approaches, EPA anticipates a net cost savings.[12] We based this prediction on an assumption that substitution of low-VOC materials for high-VOC materials is possible for all uses. Because this assumption is not true for some applications, this prediction may not be valid in all cases.

D. Considerations in Determining Whether a CTG Will Be Substantially as Effective as a Regulation

In determining whether to develop a national rule or a CTG for the product category of industrial cleaning solvents under CAA section 183(e)(3)(C), we analyzed the four factors identified above in Section I.D in light of the specific facts and circumstances associated with this product category. Based on that analysis, we propose to determine that a CTG will be substantially as effective as a rule in achieving VOC emission reductions in ozone nonattainment areas from industrial cleaning solvents.

This section is divided into two parts, each of which addresses two of the factors relevant to the CAA section 183(e)(1)(C) determination. In the first part, we determine that the most effective means of achieving VOC emission reductions in this category is through controls at the point of use of the product, (i.e., through controls on facilities that conduct solvent cleaning), and this can only be accomplished through a CTG. We further explain that the approaches in the draft CTG are consistent with existing effective state and local VOC strategies. In the second part, we discuss how the distribution and place of use of the products in this category also support the use of a CTG. We further explain that there are control approaches for this category that result in significant VOC emission reductions and that such reductions could only be obtained by controlling the use of the product through a CTG. Such reductions could not be obtained through a regulation under CAA section 183(e) because the controls affect the end-user, which is not a regulated entity under CAA section 183(e)(1)(C). Accordingly, for these reasons and the reasons described more fully below, we believe that a CTG will achieve much greater VOC emission reductions than a rule for this category.

1. The Most Effective Entity To Target for VOC Reductions and Consistency With State and Local VOC Strategies

There are two primary means to control VOC emissions associated with the industrial cleaning solvents product category: (1) Limiting the VOC content of the cleaning materials, and (2) implementing work practices governing the use of the products.

A national rule affecting industrial cleaning solvent manufacturers that limits the VOC content of the cleaning materials sold suffers from the same deficiencies noted above with regard to lithographic printing, letterpress printing, flexible packaging printing, and flat wood paneling coating. Specifically, although facilities performing cleaning operations generally purchase cleaning materials from vendors serving their respective industry, nothing in a national rule governing manufacturers would preclude them from purchasing bulk solvents or other multipurpose cleaning materials from other vendors. The general availability of bulk solvents or multipurpose cleaning materials from vendors that would not be subject to the

[11] EPA may amend the list and exercise its discretion in scheduling its actions under CAA section 183(e) in order to achieve an effective regulatory program. Should EPA revise the list in the future, these categories could change.

[12] From a purely economic perspective, the CTG does not produce a cost savings, because the recommendations contained in the document represent control methods that are currently available to facilities. Facilities can implement the recommended approach of using low-VOC materials today and recognize a cost savings.

regulation would directly undermine the effectiveness of the regulation.

A national rule also could, in theory, limit the VOC content of all cleaning materials and all solvents sold regardless of specified end use, which would ensure that only low-VOC materials are available for any use. Such an approach is unreasonable and impractical. Cleaning materials and solvents are sold for multiple different commercial and industrial purposes. Reducing the VOC content of all materials merely to achieve VOC emission reduction from two limited product categories, could preclude the use of such materials in many important, legitimate contexts. Furthermore, many general-purpose solvents used for cleaning are single compounds (e.g., toluene) or are mixtures (e.g., mineral spirits) that are by nature 100 percent VOC. Consequently, they cannot be reformulated to low-VOC content.

The more effective approach for obtaining VOC reductions from industrial cleaning solvents is to control the use of such materials through a CTG. The draft CTG recommends limiting the VOC content of cleaning materials. With the CTG, the VOC content restrictions would apply to the facility performing cleaning operations regardless of the source of the cleaning materials.

Significantly, we could not impose work practices through a CAA section 183(e) rule. Work practices, by their nature, are directed at the end-user of the product. The draft CTG recommends work practices such as keeping solvents and shop towels in closed containers. This measure alone results in significant reductions in VOC cleaning emissions, when used in conjunction with low-VOC cleaning materials. These reductions would not be possible through a CAA section 183(e) regulation because, by statute, such regulations do not apply to the end-user. Finally, the approaches recommended in the CTG are consistent with approaches taken by States and localities for industrial cleaning operations, and these approaches have proven effective in reducing VOC emissions.

Based on the sources of significant VOC emissions from industrial cleaning solvents and the available strategies for reducing such emissions, the most effective means of achieving VOC emission reductions from this product category is through controls at the point of use of the product (i.e., through controls on facilities performing solvent cleaning activities), and this can only be accomplished through a CTG. The approaches described in the draft CTG are also consistent with effective state and local VOC control strategies. These two factors alone demonstrate that a CTG will be substantially as effective as a national regulation.

2. The Product's Distribution and Place of Use and Likely VOC Emission Reductions Associated With a CTG Versus a Regulation

The factors described in the above section, taken by themselves, weigh heavily in favor of the CTG approach. The other two factors relevant to the CAA section 183(e)(3)(C) determination only further confirm that a CTG will be substantially as effective as a national regulation for industrial cleaning solvents.

First, the products described above are used at manufacturing, repair, service, and other facilities in specific, identifiable locations. This stands in contrast to other consumer products, such as architectural coatings, that are widely distributed and used by innumerable small users (e.g. individual consumers in the general public). Because the VOC emissions are occurring at commercial facilities, implementation and enforcement of controls concerning the use of products are feasible and therefore the nature of the product's place of use further counsels in favor of the CTG approach.

Second, a CTG will achieve equal or greater emission reduction than a national rule for each source of VOC emissions from industrial cleaning solvents, and, in total, a CTG will achieve significantly more emission reduction than a national rule for this category. A CTG will achieve a significant VOC emission reduction from cleaning materials through the combined use of low-VOC cleaning materials and work practices. A national rule could not effectively regulate the VOC content of cleaning materials, and a national rule cannot require work practices. In summary, a CTG will achieve a significant reduction in VOC emissions from the industrial cleaning solvents category while a national rule would achieve little, if any, emission reduction.

Upon considering the above factors in light of the facts and circumstances associated with this product category, we propose to determine that a CTG for industrial cleaning solvents will be substantially as effective as a national regulation.

VI. Statutory and Executive Order (EO) Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is ''significant'' and, therefore, subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

1. Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, EPA has determined that this action is not a ''significant regulatory action'' within the meaning of the Executive Order.

B. Paperwork Reduction Act

This action does not contain any information collection requirements and therefore is not subject to the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*).

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less

than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed determination, I certify that this action will not have a significant economic impact on a substantial number of small entities because it imposes no regulatory requirements. EPA is proposing take final action to list the five Group II consumer and commercial product categories addressed in this notice for purposes of CAA section 183(e) of the Act. The listing action alone does not impose any regulatory requirements. EPA's proposed determination that a CTG will be substantially as effective as a national regulation in achieving VOC emission reductions in ozone nonattainment areas means that EPA has concluded that it is not appropriate to issue federal regulations under CAA section 183(e) to regulate VOC emissions from these five product categories. Instead, EPA has concluded that it is appropriate to issue guidance in the form of CTG that provide recommendations to States concerning potential methods to achieve needed VOC emission reductions from these product categories. In addition to the proposed determination, EPA is also taking comment on draft CTG for these five product categories. When finalized, these CTG will be guidance documents. EPA does not directly regulate any small entities through the issuance of a CTG. Instead, EPA issues CTG to provide States with guidance on appropriate regulations to obtain VOC emission reductions from the affected sources within certain nonattainment areas. EPA's issuance of a CTG does trigger an obligation on the part of the States to issue State regulations, but States are not obligated to issue regulations identical to the Agency's CTG. States may follow the guidance or deviate from it, and the ultimate determination of whether a State regulation meets the RACT requirements of the CAA would be determined through notice and comment rulemaking in the Agency's action on each State's State Implementation Plan. Thus, States retain discretion in determining what degree to follow the CTGs.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) (UMRA), establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under UMRA section 202, 2 U.S.C. 1532, EPA generally must prepare a written statement, including a cost-benefit analysis, for any proposed or final rule that ''includes any Federal mandate that may result in the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more * * * in any one year.'' A ''Federal mandate'' is defined under section 421(6), 2 U.S.C. 658(6), to include a ''Federal intergovernmental mandate'' and a ''Federal private sector mandate.'' A ''Federal intergovernmental mandate,'' in turn, is defined to include a regulation that ''would impose an enforceable duty upon State, local, or Tribal governments,'' section 421(5)(A)(i), 2 U.S.C. 658(5)(A)(i), except for, among other things, a duty that is ''a condition of Federal assistance,'' section 421(5)(A)(i)(I). A ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector,'' with certain exceptions, section 421(7)(A), 2 U.S.C. 658(7)(A).

EPA has determined that the listing action, the proposed determination that a CTG would be substantially as effective as a regulation for these product categories, and the proposed draft CTGs for these categories, do not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, or tribal governments, in the aggregate, or the private sector in any one year. Thus, this action is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, we have determined that the listing action, the proposed determination and the proposed draft CTGs contain no regulatory requirements that might significantly or uniquely affect small governments because they contain no regulatory requirements that apply to such governments or impose obligations upon them. Therefore, this action is not subject to the requirements of section 203 of UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the EO to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The listing action, the proposed determination that CTGs are substantially as effective as regulations for these product categories, and the proposed draft CTGs do not have federalism implications. They do not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in EO 13132. The CAA establishes the relationship between the Federal Government and the States, and this action does not impact that relationship. Thus, EO 13132 does not apply to the proposed determination and proposed draft CTGs. However, in the spirit of EO 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA is soliciting comment on the listing action, the proposed determination, and the proposed draft CTGs from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

EO 13175, entitled ''Consultation and Coordination With Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications.''

The listing action, the proposed determination that CTGs would be substantially as effective as regulations to achieve VOC emission reductions from these product categories, and the proposed draft CTGs do not have Tribal implications as defined by EO 13175. They do not have a substantial direct effect on one or more Indian Tribes, in that the listing action, the proposed determination, and the proposed draft CTGs impose no regulatory burdens on tribes. Furthermore, the listing action, the proposed determination, and the proposed draft CTGs do not affect the relationship or distribution of power and responsibilities between the Federal government and Indian Tribes. The CAA and the Tribal Authority Rule (TAR) establish the relationship of the Federal government and Tribes in implementing the Clean Air Act. Because listing action, the proposed determination, and the proposed draft CTGs do not have Tribal implications, EO 13175 does not apply.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045, ''Protection of Children From Environmental Health and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that (1) Is determined to be ''economically significant'' as defined under EO 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, Section 5B501 of the EO directs the Agency to evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The listing action, the proposed determination, and the proposed draft CTGs are not subject to Executive Order 13045 because they are not economically significant regulatory actions as defined by Executive Order 12866. In addition, EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health and safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulations. The listing action, the proposed determination, and the proposed draft CTGs are not subject to Executive Order 13045 because they do not include regulatory requirements based on health or safety risks.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

Executive Order 13211 (66 FR 28355, May 22, 2001) provides that agencies shall prepare and submit to the Administrator of the Office of Regulatory Affairs, OMB, a Statement of Energy Effects for certain actions identified as ''significant energy actions.'' Section 4(b) of EO 13211 defines ''significant energy actions'' as ''any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of final rulemaking, and notices of final rulemaking: (1)(i) That is a significant regulatory action under EO 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a ''significant energy action.'' EPA has determined that listing action, the proposed determination, and the proposed draft CTGs are a not significant regulatory action under EO 12866, and that they are not likely to have a significant adverse effect on the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113; Section 12(d), 15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in their regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable VCS.

The listing action, the proposed determination that CTGS will be substantially as effective as regulations to achieve VOC emission reductions, and the proposed draft CTGs do not involve technical standards and therefore the NTTAA does not apply.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898, ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,'' provides for Federal agencies to consider the impact of programs, policies, and activities on minority populations and low-income populations, including tribes.

EPA believes that the listing action, the proposed determination, and the proposed draft CTGs should not raise any environmental justice issues. The purpose of section 183(e) is to obtain VOC emission reductions to assist in the attainment of the ozone NAAQS. The health and environmental risks associated with ozone were considered in the establishment of the ozone NAAQS. The level is designed to be protective of the public with an adequate margin of safety. EPA's listing of the products, determination that CTGs are substantially as effective as regulations, and proposed draft CTGs, are actions intended to help States achieve the NAAQS in the most appropriate fashion.

Dated: July 27, 2006.

Stephen L. Johnson,

Administrator.

For the reasons stated in the preamble, title 40, part 59, Subpart A is proposed to be amended as follows:

PART 59—[AMENDED]

1. The authority citation for part 59 continues to read as follows:

Authority: 42 U.S.C. 7511b(e).

2. Subpart A is added to read as follows:

Subpart A—General

§ 59.1 Final Determinations Under Section 183(e)(3)(C).

This section identifies the consumer and commercial product categories for which EPA has determined that CTGs will be substantially as effective as regulations in reducing VOC emissions in ozone nonattainment areas:

(a) Wood furniture coatings;
(b) Aerospace coatings;
(c) Shipbuilding and repair coatings;
(d) Lithographic printing materials;
(e) Letterpress printing materials;
(f) Flexible packaging printing materials;
(g) Flat wood paneling coatings; and
(h) Industrial cleaning solvents.

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