UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

JUN 2 6 1990

Mr. Richard Sedlak
Director of Regulatory Affairs
Soap and Detergent Association
475 Park Avenue, South
New York, NY 10016

Dear Mr. Sedlak:

As you are aware, the United States Congress is presently deliberating on amendments to the Clean Air Act (CAA). Included in the separate amendments passed by the Senate and the House are provisions for attaining the National Ambient Air Quality Standard (NAAQS) for ozone. One of the provisions specifically addresses the use of consumer and commercial products that emit volatile organic compounds (VOC's) into the ambient air. The current versions of this provision require that the U. S. Environmental Protection Agency (EPA) complete, within 3 years of enactment, a study and report to Congress on VOC emissions from the use of consumer and commercial products, their potential to contribute to ozone levels which violate the NAAQS for ozone, and recommendations for the regulation and control of these emissions.

In anticipation of passage of these amendments to the CAA, the EPA's Office of Air Quality Planning and Standards conducted in November 1989, an industry/government symposium involving the major manufacturers and distributors of consumer products, trade associations, and several State agencies actively involved in consumer product regulation. The purpose of the symposium was to initiate a dialogue among the EPA, the States, and the consumer products industry and to identify issues associated with regulation of this source of VOC emissions. Since the symposium, we have initiated several projects in the consumer products area. We expect these projects and other projects that will be performed in the future to provide information that will be included in the report to Congress.

The purpose of this letter is to inform you of studies currently in progress and to introduce you to the EPA persons responsible for and the contractor personnel associated with these studies. We anticipate that the EPA and contractor personnel will be contacting industry and trade association representatives in the course of their information gathering activities beginning now and continuing over the next few years. The studies currently in progress are briefly described below.

1. **Inventory of VOC's in Consumer Products**

A recurring comment made by the industry during the symposium was that existing inventories of VOC's in consumer products are generally unreliable and inaccurate. We plan to identify and assess existing emission inventories for each major product category, determine the product categories for which inventories are significantly deficient, develop approaches for collecting additional information, and begin to implement those approaches. Information gathering will focus on collecting information on individual product formulations and unit sales that can be used to prepare VOC inventories by product category and by chemical species. The primary contacts for this project are Bruce Moore of EPA, (919) 541-5460, and Ron Ryan of Alliance Technologies Corporation, (919) 968-9900.

2. **Aerosol Consumer Products**

As you know, there are numerous consumer products packaged in hand-held aerosol dispensers. A common attribute of these dispensers is the use of hydrocarbons (propane, butane, and isobutane) as propellants. We have begun a study to characterize the aerosol industry, provide information on the range of products dispensed via aerosol systems, quantify the amount of VOC propellants currently in use, describe conventional and innovative aerosol dispensing systems, and assess the current status and technical feasibility of alternative non-VOC propellant and non-propellant based pressurized systems. The primary contacts for this study are Beth Teague of EPA, (919) 541-5428, and Bruce Broberg of Radian Corporation, (512) 454-4797).

3. **Fate of VOC's in Wastewater and in Municipal Solid Waste**

One concern of the consumer products industry is that some of the VOC's contained in a product may never be emitted to the ambient air. For example, the VOC's contained in household cleaners and personal care products could be entrained in wastewater. Furthermore, small or large amounts of any product could remain in discarded product packaging, enter the municipal solid waste stream, and be disposed of in landfills. After entering the wastewater stream or the landfill, these VOC's may degrade or may combine with other chemical species to form compounds that are not considered to be ozone precursors. We have started studies of the fate of VOC's from consumer products in wastewater and in landfills. The primary EPA contact for both studies is Beth Teague.

The wastewater study will attempt to determine the extent to which VOC's in consumer products are affected by wastewater treatment. We plan to gather information on the operation of typical wastewater treatment facilities, identify and assess the results of existing studies concerning the fate of VOC's in wastewater transport and treatment systems, assemble currently available data on the typical VOC content of municipal wastewater and the chemical species involved, and compile information on the fate of VOC's in common septic systems, including the disposal of septic tank sludge. The principal investigator is Tom Warn of Alliance Technologies Corporation, (708) 505-8822.

Work associated with the landfill study includes collecting available information on landfill design and operation and on the behavior of VOC's in landfills. Emphasis will be placed on the physical and chemical processes involved, and the factors that affect these processes (i.e., product packaging, properties of VOC's, rate of decomposition, landfill operating practices, etc.). Gunseli Shareef of Radian Corporation, (919) 541-9100, is the project lead.

4. Underarm Deodorants and Antiperspirants

The purpose of this project is to compile background information on VOC emissions from the use of deodorants and antiperspirants. We plan to identify and evaluate existing VOC emission inventories for these products, and develop and implement approaches to improve or update inventory data as needed. Efforts will also be initiated to develop general information on industry characteristics, information on product formulations and application methods, and possible control measures, including reformulation, alternative dispensing systems, etc. The primary contacts are Bruce Moore (EPA) and Susan Miller of Radian Corporation, (919) 541-9100.

5. Aerosol Spray Paints

This project will provide an integrated study of aerosol spray paints. Project elements include a description of the aerosol paint industry, information on aerosol paint formulations and VOC contents, identification of performance-related properties of spray paints, a discussion of the roles of VOC's related to the type of delivery system and solvent-propellant interaction, and descriptions of demonstrated options for VOC reductions (e.g., high-solids formulations, non-VOC propellants, brush-on alternatives, etc.). The primary contacts are Beth Teague (EPA) and Jeff Portzer of Midwest Research Institute, (919) 677-0249.

We anticipate that the information developed in these studies will be included in the EPA's projected report to Congress. We solicit your cooperation and assistance when called upon, and will share our results and reports with you as they become available. The EPA looks forward to a continued productive relationship with the consumer products industry as we work to address the issues associated with VOC emissions from these products and the possible development of Federal regulations. Should you have any questions regarding this letter or EPA's consumer products activities in general, please contact Bruce Moore of the Emission Standards Division at (919) 541-5460.

Sincerely,

James U. Crowder, Chief
Industrial Studies Branch
Emission Standards Division