III.

TECHNICAL BASIS FOR THE PROPOSED AMENDMENTS

In this Chapter, we discuss the Board's requirements to adopt regulations that are technologically and commercially feasible. Health and Safety Code section 41712 requires all consumer product regulations adopted by the Board to be technologically and commercially feasible. During the development of the Phase I and II consumer product regulations, the ARB staff established guidelines in setting the limits to ensure that these statutory criteria were met. Also, 1996 revisions to section 41712 require that consumer product regulations not eliminate a product form. These guidelines and statutory criteria were followed in setting the proposed limits for the Mid-term Measures I and II categories, and now for the 2004 Amendments. A detailed discussion of the technical basis for each proposed limit is included in Chapter VI of the Technical Support Document.

The VOC limits proposed in the 2004 Amendments were set based on the lower volatile organic compound (VOC) content technologies existing within a product category, or are based on low emitting technology transfer from other products. In doing this, staff made sure that the various product forms within each category would be preserved. For the majority of the categories proposed for regulation, there are products on the market which currently comply. While there are no complying products currently available in the market place for Gasket or Thread Locking Adhesive Remover, Aerosol Anti-static Product, Aerosol Graffiti Remover, Aerosol Hair Styling Product, Pump Spray Toilet/Urinal Care Product and Aerosol Wood Cleaners, lower emission technology exists for achieving the proposed weight percent VOC limits. Below we will discuss the terms "technologically feasible" and "commercially feasible."

A. TECHNOLOGICALLY FEASIBLE

Health and Safety Code section 41712(b) requires the Board to adopt consumer product regulations that are "technologically feasible". Technological feasibility is a different concept than "commercial feasibility", and does not take into account the cost of the complying product. Staff believes that a proposed limit is technologically feasible if it meets at least one of the following criteria: (1) the limit is already being met by at least one product within the same category, or (2) the limit can reasonably be expected to be met in the time frame provided through additional development efforts. With the exception of the Gasket or Thread Locking Adhesive Remover, Aerosol Graffiti Remover, Aerosol Hair Styling Product, Pump Spray Toilet/Urinal Care Product and Aerosol Wood Cleaner categories**,** our survey results show that products are currently marketed that comply with the proposed limits for all of the product categories under consideration. In the case of the categories for which currently complying products do not exist**,** reformulation options are available which will allow manufacturers to produce complying products with the time allowed for development. As explained in Chapter VI, manufacturers can use exempt solvents such as acetone and exempt propellants to reformulate these products, and staff has proposed an effective date of December 31,

2006, for all but two categories, to allow time to develop viable formulations. An extra two years has been provided for the proposed VOC limit for Aerosol Anti-static Product. An extra three years to comply is proposed for a second tier VOC limit for Shaving Gels to achieve compliance. The later effective dates of December 31, 2008 and December 31, 2009, are provided to acknowledge the fact that staff anticipates reformulation efforts or packaging process changes needed to achieve these VOC limits to be challenging. Given the length of time and the possibilities for reformulation, staff believes that the proposed weight percent VOC limit for these categories are technologically feasible.

In setting the proposed limits for the 2004 Amendment categories, staff made an effort, wherever possible, to ensure that multiple reformulation technologies exist which would allow products to comply. Proposed limits were set at VOC levels that staff determined could be met without increased use of Toxic Air Contaminants or ozone-depleting compounds. General reformulation options include addition of water with co-solvents, development of emulsion products, use of low vapor pressure volatile organic compound solvents, use of non-VOC propellants, and use of exempt solvents. Multiple reformulation options allow flexibility in the design of compliant products, ensuring that efficacious, cost-effective products will be brought to the marketplace.

B. COMMERCIALLY FEASIBLE

Health and Safety Code section 41712(b) also requires the Board to adopt consumer product regulations that are "commercially feasible." The term "commercially feasible" is not defined in State law. In interpreting this term, the staff has utilized the reasoning employed by the United States Court of Appeals for the District of Columbia in interpreting the federal Clean Air Act. In the leading case of International Harvester Company v. Ruckelshaus, (D.C. Cir. 1973) 478 F. 2d 615, the Court held that the United States Environmental Protection Agency could promulgate technology-forcing motor vehicle emission limits which might result in fewer models and a more limited choice of engine types for consumers, as long as the basic market demand for new passenger automobiles could be generally met.

Following this reasoning, the staff has concluded that a regulation is "commercially feasible" as long as the "basic market demand" for a particular consumer product can be met. "Basic market demand" is the underlying need of consumers for a product to fulfill a basic, necessary function. This must be distinguished from consumer "preference", which may be towards specific attributes of a particular product. A "preference" is the choice of consumers for a certain product or products based upon fragrance, cost, texture, etc. By way of example, a consumer may need a glass cleaner to remove soils, grease, dirt or grime from their windows. Glass cleaners are formulated with glycol ether solvents or with ammonia. Consumers may choose an ammoniated glass cleaner because they prefer the performance characteristics, or they may choose a non-ammoniated glass cleaner because they dislike the smell of ammonia. This distinction is not recognized by all parties. Some commenters have expressed the view that consumers do not have a "basic market demand" for a general

class of products, but that consumers instead have a number of separate and distinct "basic market demands" for many specialty products with differing characteristics.

The ARB staff believes the consumer "preference" interpretation of "basic market demand" is inconsistent with the reasoning from the International Harvester case. To adopt such a narrow interpretation would be inconsistent with the clearly expressed legislative intent that "...the state board shall adopt regulations to achieve the maximum feasible reduction in reactive organic compounds emitted by consumer products..." (Health and Safety Code section 41712(a)). In order to achieve emission reductions, manufacturers of high VOC products which perform the same basic function as lower VOC counterparts must reduce the VOCs in their products. It is expected that when a product formulation changes, some attributes of the product will also change. If ARB were to establish limits which accounted for every distinct feature of every product, then each product would require a limit unto itself. Using this approach, it would be difficult to achieve the maximum feasible reduction in VOC emissions because changes in formulation would change product features.

Every currently marketed product has some unique features that differentiate it from other products. Consumers who purchase a product have demonstrated a preference over other competing products. This distinction between "preference" and "basic market demand" was clearly made in the International Harvester case. In the International Harvester case, the court stated that the proposed emissions limits would be feasible even though they might result in the unavailability of certain kinds of vehicles and engine types people preferred (e.g. fast "muscle" cars), as long as the basic market demand for passenger cars could be generally met. Applying this principle to consumer products, the proposed 2004 Amendments allow the basic market demand to be met for each product category, even though it may no longer be possible to manufacture products with some specific attributes. The ARB staff believe that this approach complies with section 41712.