State of California
AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking Including
Summary of Comments and Agency Response

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE EMISSION CONTROL REGULATIONS FOR 1995 AND LATER UTILITY AND LAWN AND GARDEN EQUIPMENT ENGINES

Public Hearing Date: January 25, 1996
Agenda Item No: 96-01-02

## I. GENERAL

The "Staff Report: Initial Statement of Reasons for the Proposed Rulemaking: ("Staff Report"), released December 8, 1995, is incorporated herein by reference.

At the public hearing on January 25, 1996, the Air Resources Board ("ARB") by Resolution 96-1 approved adoption of amendments to regulations for 1995 and later utility and lawn and garden equipment (utility) engines, Title 13, California Code of Regulations (CCR), Section 2403. Resolution 96-1 is attached hereto and incorporated by reference herein. Specifically, the amendments increased the carbon monoxide (CO) standard for Class I and II utility engines from 300 grams per brake horsepower-hour (g/bhp-hr) to 350 g/bhp-hr. The modified CO standard of 350 g/bhp-hr is to be effective for those utility engines produced during the 1996 through 1998 calendar years. The Board adopted the amendments with no modifications.

The referred documents have been available from ARB upon request pursuant to Title 13, CCR, Section 1902 and were available in the context of the subject rulemaking in the manner required by Government Code Section 11346.7(a).

Pursuant to Government Code section 11246.9(a)(2), ARB has determined that this regulatory action will not result in a mandate to any local agency or school district.

Pursuant to Government Code section 11346.9(a)(4), ARB has further determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons, than the action taken by ARB.

## II. SUMMARY OF COMMENTS AND AGENCY RESPONSES

During the 45-day public comment period, ARB received written comments from the Briggs and Stratton Corporation and the Propane Vehicle Council (PVC). At the public hearing, oral comments were provided by Latham and Watkins, Briggs and Stratton Corporation, McLane

Briggs and Stratton Corporation and the Propane Vehicle Council (PVC). At the public hearing, oral comments were provided by Latham and Watkins, Briggs and Stratton Corporation, McLane Manufacturing, Inc., Power Equipment Co., Engine Manufacturers Association, Outdoor Power Equipment Institute, Control Volume Technology (CVT), Western Propane Gas Association (WPGA), and Greg Tomlinson. A majority of the commentors supported the staff's recommendation. A summary of the comments recommending changes to the proposed amendment and the agency responses thereto are set forth below.

**1. Comment:** It has been stated that technology is not available to provide clean burning utility engines. Technology to reduce emissions from utility engines has been available from CVT since 1990. ARB should allow for an additional six months to discuss the merits of CVT technology, and delay their decision to relax the 300 g/bhp-hr CO standard accordingly or until CVT has a chance to demonstrate their technology. (CVT)

**Agency Response:** When emission standards are adopted, ARB does not mandate specific technologies which a manufacturer must use to achieve the standards. The manufacturers reduce emissions from their engines through technologies of their choice. The CVT technology for utility engines was evidently not available to Briggs and Stratton to thoroughly investigate. In absence of this technology, Briggs and Stratton has applied technical improvements to their low-cost utility engines models to reduce the CO emission by forty-six percent. Briggs and Stratton has further indicated a willingness to investigate the CVT technology for future application if a satisfactory legal arrangement can be reached with CVT. In addition, ARB staff has been directed by the Board Chairman to discuss the merits of CVT technology with CVT. Information from this discussion may be included in future staff reports regarding the feasibility of the 1999 utility engine emission standards.

The utility engine emission standards, adopted in December, 1990, have been in effect since August, 1995. This board hearing was prompted by a petition submitted by the Briggs and Stratton Corporation who have not certified a significant portion of their utility engines to the 300 g/bhp-hr CO standard. Unless immediate relief is provided to Briggs and Stratton through the amending of the CO standard to 350 g/bhp-hr, the unavailability of low cost utility engines in California will result in adverse economic affects for California businesses.

**2. Comment:** Carbon monoxide has a detrimental effect on human health. (CVT)

**Agency Response:** ARB is aware of the detrimental health effects caused by CO exposure. As explained in the staff report, relaxing the CO standard from 300 g/bhp-hr to 350 g/bhp-hr is not expected to adversely impact the CO attainment schedule. Although a slight increase in CO emissions from utility engines will result from this relaxation, the supply of low cost lawnmowers capable of meeting the HC plus NOx standard will be maintained. This will ensure that the retirement of older, uncontrolled lawnmowers will continue unabated, thus sustaining the reduction of ozone, the more challenging air quality problem in California. Without the CO standard relaxation, ARB would be discouraging the retirement of older,

uncontrolled lawnmowers which emit much higher CO and HC plus NOx emissions than newer lawnmowers with engines certified to the utility engine standards.

**3. Comment:** ARB should encourage utility engine manufacturers to pursue alternative technologies and technologies from other companies to comply with emission standards. (Greg Tomlinson, PVC, WPGA)

**Agency Response:** Staff has been directed to present progress reports to the Board outlining various technologies which can be used by utility engine manufacturers to meet the 1999 utility engine emission standards. In their effort to report the feasibility of the 1999 standards, staff encourages manufacturers to pursue alternative technologies as well as conventional methods in complying with the standards. Staff will be presenting another progress report to the Board in the Fall of 1996.

**4. Comment:** The use of vaporizing carburetors, which significantly reduces emissions by providing a uniform lean air-fuel mixture to the engine through fuel evaporation, may allow Briggs and Stratton to meet the 300 g/bhp-hr CO standard. (PVC)

**Agency Response:** At this time, vaporizing carburetor technology would require more development work before it could be applied to a production engine. Specifically, a proper heat source required by the vaporizing carburetor has yet to be successfully designed. This technology will likely be revisited if the technology evolves. ARB staff believes this technology may assist manufacturers in their effort to achieve the 1999 utility engine emission standards; however, this technology has yet to mature sufficiently to provide manufacturers with a viable technology capable of achieving the current utility engine emission standards.

**5. Comment:** Briggs and Stratton may be able to use propane fuel, which has been demonstrated to reduce CO emissions significantly from utility engines, to meet the 300 g/bhp-hr CO standard. (PVC)

**Agency Response:** Propane fuel has been used by some utility engine manufacturers to meet the current utility engine emission standards. Briggs and Stratton, however, stated that propane tanks are too heavy and bulky to be of practical use on their low cost lawnmowers. Although propane does provide some manufacturers the ability to achieve the current utility emission standards, these standards were not predicated on the use of advance technologies to meet the 300 g/bhp-hr CO standard.