State of California
AIR RESOURCES BOARD

Staff Report: Initial Statement of Reasons
for Proposed Rulemaking

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE HYDROCARBON AND OXIDES OF NITROGEN EMISSION STANDARDS FOR 1995 AND LATER UTILITY AND LAWN AND GARDEN EQUIPMENT ENGINES USED IN SNOWTHROWERS AND ICE AUGERS, AND TO THE CARBON MONOXIDE STANDARD FOR 1996-1998 OFF-HIGHWAY RECREATIONAL VEHICLES AND ENGINES

Date of Release: August 9, 1996
Scheduled for Consideration: September 26, 1996
Agenda Item No.: [96-__-__]

I. SUMMARY AND RECOMMENDED ACTIONS

The Air Resources Board ("ARB") is proposing several minor changes to its off-road regulations[1]. In response to a petition by the Tecumseh and Toro Companies[2], staff is recommending that ARB approve amendments to the utility and lawn and garden equipment engine (utility engine) regulations, (Title 13, California Code of Regulations, Section 2403, et seq.), making the hydrocarbon (HC) and oxides of nitrogen (NOx) standards optional for engines used in snowthrowers and ice augers. By providing optional HC and NOx standards for snowthrowers and ice augers, ARB would be bringing California standards in line with federal standards for similar types of engines. Staff is also recommending that ARB approve an amendment to raise the carbon monoxide (CO) standard from 300 g/bhp-hr to 350 g/bhp-hr for specialty vehicles under 25 horsepower, and produced during calendar years 1996-1998. On January 25, 1996, in response to a petition from the Briggs & Stratton Corporation, ARB adopted an amendment for utility engines modifying the CO standard to 350 g/bhp-hr. Staff is proposing that the standard be similarly modified for specialty vehicles because manufacturers supply the same engines for both specialty vehicles and utility equipment.

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[1] A copy of the proposed amendments is attached as Attachment "A".

[2] A copy of the petition and affidavits, in support of the petition, are attached as Attachment "B".

The air quality impacts from the regulatory proposals should be minimal, if not negligible, and should cause no adverse economic impacts. Indeed, the modifications should result in economic benefit to engine and equipment manufacturers, distributors, and retailers.

II. BACKGROUND

A. Utility Engines

ARB was granted the authority to regulate off-road mobile sources of emissions in the California Clean Air Act (CCAA) of 1988, as codified in the Health and Safety Code sections 43013 and 43018. Included in the off-road category are utility engines. The utility engine regulations were originally approved for adoption by ARB in December 1990, and were formally adopted on March 20, 1992. The standards include HC, NOx, and CO emission limits for snowthrowers and ice augers. The utility engine regulations include two levels of exhaust emission standards, Tier I and II, and provisions for emission test procedures, engine labeling, warranty, and compliance programs. Tier I standards were to apply to engines produced from January 1, 1994, to December 31, 1998, while Tier II standards apply to engines produced on or after January 1, 1999. Upon consideration of a petition filed by industry, ARB amended the regulations in April 1993 to delay implementing the regulations for one year, making the regulations applicable to engines produced on or after January 1, 1995.

Under Title II of the federal Clean Air Act (CAA), the United States Environmental Protection Agency (U.S. EPA) has promulgated regulations to control emissions from new nonroad spark ignition engines under 19 kilowatts (25 horsepower)[3]. In contrast to the utility engine regulations, however, the federal regulations only established a first tier of emission standards. These standards are similar to but not identical to the Tier I utility engine standards. Under section 209(e)(2) of the CAA, California may adopt and enforce independent standards for not otherwise expressly preempted off-road engines, provided the administrator of U.S. EPA grants California authorization. California received authorization from U.S. EPA on July 3, 1995[4]. As initially adopted the California regulations were fully applicable to snowthrowers and ice augers, making the California standards more stringent than under the federal regulations. The federal regulations exempted snowthrowers and ice augers from having to meet the HC and NOx standards that were applicable to all other engines.

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[3] 40 CFR Parts 9 and 90, 60 Fed. Reg. 34582 (July 3, 1995).

[4] 60 Fed.Reg. 37440 (July 20, 1995).

On or about March 28, 1996, the Tecumseh Products Company and the Toro Company, along with several servicing dealers, petitioned ARB to exempt snowthrowers and ice augers from having to meet emission standards for HC and NOx. Thus, those products would only be subject to emission standards for CO. In response to the petition, staff is recommending that ARB approve amendments to the utility engine regulations (Title 13, California Code of Regulations, Section 2403, et seq.) making the HC and NOx standards optional for engines used in snowthrowers and ice augers. By providing optional HC and NOx standards for snowthrowers and ice augers, ARB would be harmonizing the California emission standards with the federal standards.

B Off-Highway Recreational Vehicle Engines

On January 25, 1996, ARB amended the emission control regulations for 1995 and later utility and lawn and garden equipment engines as a result of a petition from the Briggs & Stratton Corporation. The amendment relaxed the CO standard, for Class I and Class II utility engines rated at less than 25 horsepower, from 300 g/bhp-hr to 350 g/bhp-hr for the 1996-1998 calendar years. ARB staff is proposing that the CO standard be similarly modified for specialty vehicles, under 25 horsepower, produced during calendar years 1996-1998. Staff is proposing this modification to section 2412 (b) because manufacturers supply the same engines for both specialty vehicles and utility equipment.

U.S. EPA does not have a classification for specialty vehicles. However, engines used in specialty vehicles are regulated under the emission standards for new nonroad spark ignition engines under 19 kilowatts. U.S. EPA is presently considering adopting amendments to its CO standard for Class I and Class II spark ignition engines, under 19 kilowatts, (June 28, 1996 U.S. EPA public notice), similar to the amendments proposed here and which have been previously adopted for Class I and II utility engines.

III. DISCUSSION

A. Utility Engines

The petition filed by the Tecumseh and the Toro companies seeks to align the California utility regulations with the federal 19 kilowatt rule. Under the federal regulations, manufacturers of engines used in snowthrowers and ice augers may elect to certify engines only to the CO standards and be exempt from the HC and NOx requirements. In so adopting the rule, the U.S. EPA concluded that HC and NOx standards were unnecessary for these equipment because they are used in the winter and their emissions do not contribute to summertime ozone nonattainment concentrations.

Tecumseh and Toro contend that because of the federal rule and because the vast majority of snowthrowers and ice augers are produced for markets outside of California (it is estimated that less than two percent of the total national production is sold in California), the present California regulations, which require manufacturers to produce different product lines for national and California sales, impose an undue financial burden on these manufacturers. They further contend that the burden is not justified by compelling environmental need or perceived benefit from the regulation. Finally, they believe that if the federal and state regulations are not aligned, snowthrower and ice augers may be forced out of the California marketplace, with consequential adverse impacts for retailers, consumers, and the environment.

Snowthrowers and ice augers are generally sold by servicing dealers, who are typically small family businesses. Although the impact on the California economy as a whole would be negligible, the elimination of new snowthrower and ice auger inventory in California may possibly harm these utility equipment dealers who rely, in varying degrees, on snowthrower and ice auger sales for their economic livelihood. Consumers would also be impacted if new snowthrowers and ice augers were eliminated from the California market. Snowthrower and ice auger owners would possibly repair and rebuild their uncontrolled units beyond their customary practice in order to extend their service life which could cause CO and other emissions to become an air quality concern. When the snowthrower or ice auger can no longer be rebuilt, the consumer would be forced to seek a replacement unit outside of California. These out-of-state snowthrowers and ice augers would most likely meet the EPA Phase-I limits, and therefore, the effect on California air would be the same as if the Joint Petition were granted.

Staff generally concurs with the comments made in the petition and in the federal rule. It is thus recommending that the HC and NOx emission standards be made optional for engines used in snowthrowers and ice augers. Manufacturers may still opt to meet the HC and NOx standards to take advantage of "green marketing" opportunities.

B. Off-Highway Recreational Vehicle Engines

On or about July 26, 1995, the Briggs & Stratton Corporation, petitioned ARB to amend the 300 g/bhp-hr CO standard in the Class I and II categories to 350 g/bhp-hr. In the petition, the company contended that the amendment was necessary because the CO standard was not technologically feasible for the engines in Class I and II engine families. Furthermore, if the standard were not changed, Briggs and Stratton would not risk certifying their high volume, low cost lawnmower engine models in California which would operate too closely to the acceptable performance limit when calibrated to meet the 300 g/bhp-hr CO standard. Briggs and Stratton asserted that a significant amount of warranty claims to replace poorly operating new lawnmower engines would result if these low cost, high volume engine models are

forced to meet the 300 g/bhp-hr CO standard. Therefore, a number of California businesses would be adversely affected by the unavailability of a full range of utility engines.

While staff did not agree that the 300 g/bhp-hr CO standard was technically infeasible, it did concur that warranty claims resulting from poorly operating new lawnmower engines operating too closely to the acceptable performance limit may have a significant economic impact on the manufacturer. The lack of available lawnmower engines could have a negative impact on many California small businesses such as landscaping and garden care businesses. Consequently, ARB amended the emission control regulations for 1995 and later utility equipment engines. The amendment relaxed the CO standard, for Class I and Class II utility engines rated at less than 25 horsepower (Tier I standards), from 300 g/bhp-hr to 350 g/bhp-hr for the 1996-1998 calendar years. ARB is proposing to similarly modify the standards for specialty vehicles, under 25 horsepower, produced during calendar years 1996-1998. This is necessary because manufacturers use the same engines for both specialty vehicles and utility equipment.

IV. ISSUES OF CONTROVERSY

There are no known or anticipated issues of controversy with these proposed regulatory amendments.

V. REGULATORY ALTERNATIVES

The staff has not identified any alternatives to the proposed regulatory amendments that would provide the same consistency with the federal and state regulations and avoid unnecessary economic displacement to the states economy.

VI. AIR QUALITY, ENVIRONMENTAL, AND COST IMPACTS

A. Air quality and environmental impacts

1. Ozone Attainment Effects

Staff's emission inventory estimates for snowthrowers and ice augers are based on information obtained from independent contractors, industry associations, manufacturers, and other state agencies. From this input, staff estimated the emissions impact of the proposed amendments by conducting a worst-case comparison of the HC and NOx emissions of engines that comply with the standards as presently adopted to uncontrolled engines. The HC and NOx standards, as presently in effect, would yield a statewide emission inventory for snowthrowers and ice augers of about 7 tons per year (TPY), assuming all equipment met the standards. In contrast, the statewide HC and

NOx emission inventory for uncontrolled snowthrowers and ice augers would be about 60 TPY. Consequently, the loss in air quality benefit would be approximately 53 TPY (0.1 tons per day) of HC plus NOx. This amount represents approximately 0.029% of the total off-road HC plus NOx emissions inventory. The impacts of these emissions and ozone formation should be relatively insignificant because these types of equipment are used almost exclusively during the wintertime and most frequently in areas without severe ozone problems.

The regulation of HC and NOx limits for snowthrowers and ice augers does not significantly assist in ozone attainment. This is due to HC and NOx emissions from snowthrowers and ice augers being insignificant in comparison to the total emissions from the state's utility and lawn and garden sector. HC and NOx emissions become even less significant when considering ground level ozone, because snowthrower and ice auger emissions are produced primarily in the wintertime when ozone problems generally do not occur. Finally, although ARB does not have any specific basin use data, it is generally accepted that snowthrowers and ice augers are not used in basins with the worst ozone levels (e.g., South Coast Air Basin) but are used in areas with greater CO concerns (e.g., Lake Tahoe). Accordingly, in these areas, it is important to not delay the retirement and turnover of old, high CO emitting snowthrowers and ice augers to new snowthrowers and ice augers meeting the 1996 Tier I CO standard. The staff's proposal would allow the natural retirement of the old snowthrowers and ice augers to continue unabated.

2. *CO Attainment Effects*

Staff's emission inventory estimates for specialty vehicles are based on information obtained from independent contractors, industry associations, manufacturers, and other state agencies. From this input, staff estimated the air quality impact for calendar year 1998 since this would be the final year for a 350 g/bhp-hr CO emission standard as presently in effect. The statewide CO emission inventory for specialty vehicles with a 300 g/bhp-hr emission standard in calendar year 1998 would be about 32 tons per year (TPY). In relaxing the CO standard to 350 g/bhp-hr the statewide emission inventory in 1998 would be 40 TPY, the loss in air quality benefit would be 8 TPY of CO (.02 tons per day). This represents only .004% of the total off-road CO emissions inventory.

In California, ambient CO levels have been decreasing steadily during the past few years. Since most California air basins have recently come into compliance with the ambient CO standard as established by the National Ambient Air Quality Standards (NAAQS), ARB plans to request from U.S. EPA a redesignation of those air basins currently categorized as in CO

nonattainment. The South Coast air basin and possibly the Lake Tahoe air basin may be the only two basins, of the fourteen California air basins, currently having difficulty achieving the NAAQS for CO. During 1992, the South Coast air basin, for example, exceeded the NAAQS for CO on six days and was the only California air basin in violation for CO. Presently, the Lake Tahoe and South Coast air basin are scheduled to achieve CO attainment by the year 2000. The increase of the CO emission standard from 300g/bhp-hr to 350 g/bhp-hr for specialty vehicles should not affect the scheduled attainment dates or have any other adverse affects on CO attainment.

B. COST, COST-EFFECTIVENESS, AND ECONOMIC IMPACTS

The ARB has also determined that there will be no, or an insignificant, potential cost impact, as defined in Government Code Section 11346.5(a)(9), on private persons or businesses directly affected resulting from the proposed actions. In fact, positive economic opportunities are possible due to increased marketing opportunities and lower cost products.

C. IMPACT ON THE ECONOMY OF THE STATE

The proposed amendments would not adversely affect the economy of the state. As stated above, the proposed amendments are expected to prevent an adverse economic impact for industry. Therefore, the impact on the state's economy should be positive as it allows continued small business growth and employment.

To the extent that the amendments may have some relative adverse impact on air quality, overriding economic considerations exist to justify the optional HC and NOx standards for snowthrowers and ice augers and the revised CO standard for specialty vehicles. The optional standards for the identified wintertime products should assure that such products remain available to the California market, with consequential benefits flowing to manufacturers, distributors, retailers, and consumers. Similarly, because specialty vehicles use the same engines as class I and II utility engines, if the amendment were not adopted, manufacturers would potentially be faced with having to develop special engines for one application in the California market. This could result in the engines not being available and cause significant economic displacement for manufacturers, distributors and retailers.

VII. COMPARABLE FEDERAL REGULATIONS

As previously stated, the proposal to adopt optional HC and NOx standards for snowthrowers and ice augers would align the California utility regulation with the federal 19 kilowatt rule. In granting California authority to adopt and enforce the utility regulation, the U.S. EPA found that California's finding regarding protectiveness was not arbitrary and capricious and that, in the aggregate, the utility regulations were more stringent than

comparable federal regulations. The proposed amendment for snowthrowers and ice auger engines would not undermine that finding. Californias more stringent definition of hand-held equipment, standards for diesel engines, and tier 2 standards continue to make California's standards, in the aggregate, more stringent.

California has similarly filed an authorization request for specialty vehicles as part of its recreational vehicle regulation, and has made a similar finding that the California standards, are in the aggregate more stringent than comparable federal regulations. Engines used in specialty vehicles are regulated under the federal 19 kilowatt rule. Although the proposed CO standard is numerically equivalent to the federal CO standard, the proposed standard would actually be less stringent than the federal standard. This is because California test procedures allow manufacturers to use Phase II fuel for certification testing. In contrast, U.S. EPA certification test procedures require the use of a certain gasoline test fuel commonly-referred to as Indolene. Consequently, if adopted, the proposed California CO standard of 350 g/bhp-hr for Class I and II utility engines would not be equivalent; but in fact, be less stringent than the 350 g/bhp-hr Class I and II utility engine CO standard as adopted by U.S. EPA. The federal agency, however, is proposing to revise the CO standard to a level equal to that proposed in this rulemaking[5]. The proposed revision to the CO standard, if adopted, would make the U.S. EPA and the state CO standard equivalent, for specialty vehicles, and it would also be consistent with ARB's January 1996 adoption of the relaxed CO standard for utility engines. The proposed amendment does not undermine California's previous finding that the recreational vehicle regulation, in the aggregate, is more stringent than comparable federal regulations.

VIII. REFERENCES

Air Resources Board Mail-Out #90-64, Staff Report: Initial Statement of Reasons for Proposed Rulemaking for 1994 and Subsequent Model Year Utility and Lawn and Garden Equipment Engines, California Air Resources Board, October 22, 1990.

Control of Air Pollution; Emission Standards for New Nonroad Spark--Ignition Engines At or Below 19 Kilowatts, United States Environmental Protection Agency, 60 Federal Register 34582, July 3, 1995.

Air Resources Board Mail-Out #95-43, Staff Report: Amendments to the Emission Control Regulations for 1995 and Later Utility and Lawn and Garden Equipment Engines, California Air Resources Board, December 8, 1995.

5. 61 Red.Reg. 34778 (July 3, 1996).

Air Resources Board Mail-Out #95-29, Staff Report: Amended Utility and Lawn and Garden Equipment Engine Emission Regulations and Test Procedures, California Air Resources Board, August 18, 1995.

Air Resources Board Mail-Out #93-54, Staff Report: Adoption of Emission Control Regulations for Off-Highway Recreational Vehicles and Engines, California Air Resources Board, November 24, 1993.

Proposed Rules Environmental Protection Agency, Revised Carbon Monoxide (CO) Standard for Class I and II Nonhandheld New Nonroad Phase 1 Small Spark-Ignition Engines, 61 Fed.Reg. 34778, July 3, 1996.

ATTACHMENT A

PROPOSED AMENDMENTS TO REGULATION

State of California
Air Resources Board

Amendments to Title 13, California Code of Regulations,
Chapter 9, Article 1, Section 2403, .
CALIFORNIA REGULATIONS FOR 1995 AND LATER
UTILITY AND LAWN AND GARDEN EQUIPMENT ENGINES

NOTE: This document is printed in a style to indicate changes from the existing provisions. All existing language is indicated by plain type. All additions to language are indicated by underline. All deletions to language are indicated by ~~strikeout~~.

The standards as presented reflect the amendments adopted by ARB on January 25, 1996, which revised the carbon monoxide standard for Class I and II engines from 300 to 350 grams per brake horsepower.

2403. Exhaust Emission Standards and Test Procedures--Utility and Lawn and Garden Equipment Engines.

(a) This section shall be applicable to utility and lawn and garden equipment engines produced on or after January 1, 1995.

(b) Exhaust emissions from new utility and lawn and garden equipment engines, manufactured for sale, sold, offered for sale, introduced or delivered for introduction into commerce in, or imported into California, shall not exceed:

Exhaust Emission Standards
(grams per brake horsepower-hour)

Calendar Year	Engine Class [1]	Hydrocarbon plus oxides of nitrogen [2]	Hydrocarbon [2]	Carbon Monoxide	Oxides of Nitrogen	Particulate
1995	I	12.0	--	300	--	0.9[3]
	II	10.0	--	300	--	0.9[3]
	III[4]	--	220	600	4.0	--
	IV[4]	--	180	600	4.0	--
	V[4]	--	120	300	4.0	--
1996 to 1998	I	12.0[6]	--	350	--	0.9[3]
	II	10.0[6]	--	350	--	0.9[3]
	III[4]	--	220[6]	600	4.0[6]	--
	IV[4]	--	180[6]	600	4.0[6]	--
	V[4]	--	120[6]	300	4.0[6]	--
1999 and subsequent	I, II	3.2[6]	--	100	--	0.25[5]
	III, IV, V[4]	--	50[6]	130	4.0[6]	0.25[5]

(1) "Class I" means utility and lawn and garden equipment engines less than 225 cc in displacement.
"Class II" means utility and lawn and garden equipment engines greater than or equal to 225 cc in displacement.
"Class III" means hand held utility and lawn and garden equipment engines less than 20 cc in displacement.
"Class IV" means hand held utility and lawn and garden equipment engines 20 cc to less than 50 cc in displacement.
"Class V" means hand held utility and lawn and garden equipment engines greater than or equal to 50 cc in displacement.

(2) The Executive Officer may allow gaseous-fueled (i.e., propane, natural gas) engine families, that satisfy the requirements of the regulations, to certify to either the hydrocarbon plus oxides of nitrogen or hydrocarbon emission standard, as applicable. on the basis of the non-methane hydrocarbon (NMHC) portion of the total hydrocarbon emissions.

(3) Applicable to all diesel-cycle engines.

(4) These standards may be used for engines that meet the requirements of (I) and (ii) below, and for two-stroke engines that exclusively power snowthrowers.
(I) The engine must be used in a hand-held piece of equipment. To be classified as a hand-held piece of equipment, the equipment must require its full weight to be supported by the operator in the performance of its requisite function.
(ii) The engine and equipment must require multi-positional characteristics for use (e.g. it must be capable of operating in any position, upside down, or sideways as required to complete the job).

(5) Applicable to all diesel-cycle engines, and all two-stroke engines.

(6) Engines used exclusively in snowthrowers and ice augers need not certify to or comply with the HC and NOx standards at the option of the manufacturer.

(c) The test procedures for determining compliance with the standards for exhaust emissions from new utility and lawn and garden equipment engines are set forth in "California Exhaust Emission Standards and Test Procedures for 1995 and Later Utility and Lawn and Garden Equipment Engines", adopted March 20, 1992, and last amended May 26, 1995.

(d) In 1995 and subsequent years, fire and police departments, and other entities which specialize in emergency response may purchase emergency equipment powered by a non-California certified engine only when such equipment with a California-certified engine is

not available. For purposes of this section, a request to purchase emergency equipment powered by a non-California certified engine shall be submitted for approval to the Executive Officer.

(e) No new engines shall be produced for sale to replace pre-1995 model equipment after January 1, 1999, unless those engines comply with the 1995 model emission standards.

(f) Any new equipment engine certified to comply with California emission standards and test procedures for on-road or other off-road applications may, upon approval by the Executive Officer be in compliance with these regulations.

NOTE: Authority cited: Sections 39600, 39601, 43103 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

State of California
AIR RESOURCES BOARD

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 1995 AND LATER UTILITY AND LAWN AND GARDEN EQUIPMENT ENGINES

Adopted:	March 20, 1992
Amended:	April 8, 1993
Amended:	August 29, 1994
Amended:	May 26, 1995
Amended:	_____

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The numbering convention employed in this document, in order of priority, is: I.1.a.1.i.A.

Amend Title 13, California Code of Regulations, Part I, Section 9 of the incorporated "California Exhaust Emission Standards and Test Procedures for 1995 and Later Utility and Lawn and Garden Equipment Engines", to read as follows:

Part I. Emission Regulations for 1995 and Later New Lawn and Garden and Utility Equipment Engines, General Provisions.

1. through 8. [No Change]

9. Exhaust Emission Standards For 1995 and Later Utility and Lawn and Garden Engines.

(a) This Section shall be applicable to utility and lawn and garden engines produced on or after January 1, 1995.

(b) Exhaust emissions from new utility and lawn and garden equipment engines, manufactured for sale, sold, offered for sale, introduced or delivered for introduction into commerce, or imported into California, shall not exceed:

Exhaust Emission Standards
(grams per brake horsepower-hour)

Calendar Year	Engine Class [1]	Hydrocarbon plus oxides of nitrogen[2]	Hydrocarbon [2]	Carbon Monoxide	Oxides of Nitrogen	Particulate
1995	I	12.0	--	300	--	0.9[3]
	II	10.0	--	300	--	0.9[3]
	III[4]	--	220	600	4.0	--
	IV[4]	--	180	600	4.0	--
	V[4]	--	120	300	4.0	--
1996 to 1998	I	12.0[6]	--	350	--	0.9[3]
	II	10.0[6]	--	350	--	0.9[3]
	III[4]	--	220[6]	600	4.0[6]	--
	IV[4]	--	180[6]	600	4.0[6]	--
	V[4]	--	120[6]	300	4.0[6]	--
1999 and subsequent	I, II	3.2[6]	--	100	--	0.25[5]
	III, IV, V[4]	--	50[6]	130	4.0[6]	0.25[5]

(1) "Class I" means utility and lawn and garden equipment engines less than 225 cc in displacement.
"Class II" means utility and lawn and garden equipment engines greater than or equal to 225 cc in displacement.
"Class III" means hand held utility and lawn and garden equipment engines less than 20 cc in displacement.
"Class IV" means hand held utility and lawn and garden equipment engines 20 cc to less than 50 cc in displacement.
"Class V" means hand held utility and lawn and garden equipment engines greater than or equal to 50 cc in displacement.

(2) The Executive Officer may allow gaseous-fueled (i.e., propane, natural gas) engine families, that satisfy the requirements of Section 20 of Part

I, to certify to either the hydrocarbon plus oxides of nitrogen or hydrocarbon emission standard, as applicable, on the basis of the

Exhaust Emission Standards (continued)

non-methane hydrocarbon (NMHC) portion of the total hydrocarbon emissions.

(3) Applicable to all diesel-cycle engines.

(4) These standards may be used for engines that meet the requirements of (i) and (ii) below, and for two-stroke engines that power only snow throwers.

(i) The engine must be used in a hand-held piece of equipment. To be classified as a hand-held piece of equipment, the equipment must require its full weight to be supported by the operator in the performance of its requisite function.

(ii) The engine and equipment must require multi-positional characteristics for use (e.g. it must be capable of operating in any position, upside down, or sideways as required to complete the job).

(5) Applicable to all diesel-cycle engines, and all two-stroke engines.

(6) Engines used exclusively in snowthrowers and ice augers need not certify to or comply with the HC and Nox standards at the option of the manufacturer.

(c) In 1995 and subsequent years, fire and police departments, and other entities which specialize in emergency response may purchase emergency equipment powered by a non-California-certified engine only when such equipment with a California-certified engine is not available. For purposes of this Section, a request to purchase emergency equipment powered by a non- California-certified engine shall be submitted for approval to the Executive Officer.

PROPOSED AMENDMENTS TO REGULATIONS

State of California
AIR RESOURCES BOARD

Amendments to Title 13, California Code of Regulations,
Chapter 9, Article 3, Section 2412
California Exhaust Emissions Standards and Test Procedures
For 1995 And Later Off-Highway Recreational Vehicles and Engines

NOTE: This document is printed in a style to indicate changes from the existing provisions. All existing language is indicated by plain type. All additions to language are indicated by underline. All deletions to language are indicated by ~~strikeout~~.

2412. Emission Standards and Test Procedures--New Off-Highway Recreational Vehicles and Engines.

(a) This section shall be applicable to specialty vehicle engines under 25 horsepower produced on or after January 1, 1995, and all other off-highway recreational vehicles and engines used in such vehicles produced on or after January 1, 1997.

(b) For purposes of certification in California, manufacturers shall comply with the following exhaust emissions from new off-highway recreational vehicles and engines that are sold, leased, used, or introduced into commerce in California. Exhaust emissions shall not exceed:

~~Proposed~~ Emission Standards

Vehicle & Model Year	Hydrocarbon	Oxides of Nitrogen	Carbon Monoxide	Particulate Matter[1]
Off-Road Motorcycles and All-Terrain Vehicles with Engines Greater Than 90 CC[3]				
1997 and Later (g/krn)[4]	1 ,2[2]	-	.... 15.0	-
Off-Road Motorcycles and All-Terrain Vehicles with Engines 90 cc or Less 1999 and Later (g/krn)	1 .2[2]	-	.... 15.0	-
All-Terrain Vehicles theOption 1997 and Later	Shall comply with exhaust emission standards equivalent to off-roadmotorcycle and all-terrain vehicle standard using the utility test procedures set forth in CCR, Title 13, section 2403, and the incorporated document "California Exhaust Emission Standards and Test Procedures for 1995 and Later Utility and Lawn and Garden Equipment Engines" which is hereby incorporated by reference herein[5]			
Golf Carts in Federal Ozone Non-Attainment Areas 1997 and Later	ZERO	ZERO	ZERO	ZERO
Specialty Vehicle Engines <25 horsepower				
1995-~~1998~~ [Date of Amendmentl	10.0/12.0[6] Combined		300	0.9
[DateofAmendment]-1998	100/12.0[6] Comhined		~~300~~ 350	0.9
1999 and Later (G/bhp-hr)[7]	3.2 Combined		100	0.25
Go-Karts and Specialty Vehicle Engines >25 horsepower 1997 and Later (g/bhp-hr)	3.2 Combined		100	0.25

1. Applicable to diesel and two-stroke spark ignited engines only.
2. Compliance with the 1.2 gram per kilometer HC standard to be applied as a "corporate average" shall be determined as provided in subsection (d). Each engine family shall

have only one applicable standard.

3. Cubic centimeter.
4. Grams per kilometer.
5. Compliance with the equivalent all-terrain vehicle HC standard to be applied as a "corporate average" shall be determined as provided in subsection (d). Each engine family shall have only one applicable standard.
6. The standard is applicable based on the engine displacement. Engines <225 cubic centimeters (cc) shall comply with 12.0 g/Bhp-hr HC+NOx standard and engines 225cc and greater shall comply with the 10.0 g/Bhp-hr HC+NOx standard.
7. Grams per brake-horsepower-hour.

(c) (1) The test procedures for determining certification and compliance with the standards for exhaust emissions from new off-road motorcycles, all-terrain vehicles, and golf carts are set forth in "California Exhaust Emission Standards and Test Procedures for 1995 and Later Off-Highway Recreational Vehicles and Engines," adopted November 23, 1994, which incorporates by reference Subparts E and F, Title 40, Code of Federal Regulations. **There are no** emission test procedures for golf carts.[8]

(2) The test procedures for determining certification and compliance with the standards for exhaust emissions from new specialty vehicles and go-karts, and engines used in such vehicles, and all terrain vehicle engines (those engines utilizing the optional standards noted in (b) above) are set forth in "California Exhaust Emission Standards and Test Procedures for 1995 and Later Lawn and Garden and Utility Equipment Engines" adopted March 20, 1992, and last amended April 8, 1993.

(d) Compliance with a standard to be applied as a "corporate average" shall be determined as follows:

$$\frac{\sum_{j=1}^{n} (PROD)_{jx} (STD)_{jx}}{\sum_{j=1}^{n} (PROD)_{jx}} = STD_{ca}$$

n = Off-road motorcycle and all-terrain vehicle engine families.

$PROD_{jx}$ = Number of units in engine family j produced for sale in California in model year x.

STD_{jx} = The manufacturer designated HC exhaust emission standard for engine family j in model year x, which shall be determined by the manufacturer subject to the following conditions: (1) no individual engine family exhaust emission standard shall exceed 2.5 g/km, and (2) no engine family designation or engine family exhaust emission standard shall be amended in a model year after the engine family is certified for the model year, and (3) prior to sale or offering for sale in California, each engine family shall be certified in accordance with "California Exhaust Emission Standards and Test Procedures for 1995 and Later Off-Highway Recreational Vehicle and Engine" adopted November 23, 1994, and shall be required to meet the manufacturer's designated HC exhaust emission standard as a condition of the certification Executive Order. Prior to certification the manufacturer shall also submit estimated production volumes for each engine family to be offered for sale in California.

STD_{ca} = A manufacturer's corporate average HC exhaust emissions from those California off-road motorcycles and all-terrain vehicles subject to the California corporate average HC exhaust emissions standard, as established by an Executive Order certifying the California production for the model year. This order must be obtained prior to the issuance of certification Executive Orders for individual engine families for the model year and shall include but not be limited to the following requirements:

(1) During the manufacturer's production year, for each vehicle produced for sale in California, the manufacturer shall provide the following information to the Executive Officer within 30 days after the last day in each calendar quarter:

(i) vehicle identification numbers and an explanation ofthe identification code if applicable;

(ii) model number and engine size of vehicle;

(iii) the total number of vehicles marketed and produced as non-competition vehicles for sale in California and their applicable designated emissions standards.

(2) The manufacturer's average HC exhaust emissions shall meet the corporate average standard at the end of the manufacturer's production for the model year.

(3) Production and sale of vehicles which result in non-compliance with the California standard for the model year shall cause a manufacturer to be subject to civil penalties, according to applicable provisions of the Health and Safety Code. All excess emissions resulting from non-compliance with the California standard shall be made up in the following model year.

(4) For a period of up to one year following the end of the model year, the manufacturer shall submit California sales and registration data as it becomes available, for each model.

(e) As an option to the standards set forth in section (b) above, exhaust emissions from 1997 and later all-terrain vehicle engines shall not exceed the equivalent to the off-road motorcycle and all-terrain vehicle standard using the utility test procedures set forth in "California Exhaust Emission Standards and Test Procedures for 1995 and Later Utility and Lawn and Garden Equipment Engines", adopted, March 20, 1992, and last amended April 8, 1993, which is hereby incorporated by reference herein.

(f) (1) On or after January 1, 1995, no new engines shall be produced for sale to replace specialty vehicle engines, unless the engines comply with the emission standards in effect at the time of replacement.

(2) On or after January 1, 1997, no new engines greater than 90 cc shall be produced for sale to replace off-road motorcycles, all-terrain vehicles, go-karts and engines used in such vehicles, unless those engines comply with the emission control standards in effect at the time of replacement.

(3) On or after January 1, 1997, manufacturers shall not produce for sale in federal ozone non-attainment areas of California new, non-zero emission engines for golf carts.

(4) On or after January 1, 1999, no new engines 90 cc or less shall be produced for sale to replace off-road motorcycle and all-terrain vehicle engines, unless those engines comply with the emission control standards in effect at the time of replacement.

(g) The Executive Officer may find that any off-road motorcycles, all-terrain vehicles, specialty vehicles, go-karts or engines used in such vehicles certified to comply with California emission standards and test procedures for on-road or other off-road applications are in compliance with these regulations.

(h) No crankcase emissions shall be discharged into the ambient atmosphere from 1997 and later off-road motorcycles, all-terrain vehicles, golf carts, or engines used in such vehicles.

(i) Applicable to diesel and two-stroke spark ignited engines only. (2) Compliance with the 1.2 gram per kilometer HC standard to be applied as a "corporate average" shall be determined as provided in subsection(d). Each engine family shall have only one applicable standard. (3) Cubic centimeter. (4) Grams per kilometer. (5) Compliance with the equivalent all-telTain vehicle HC standard to be applied as a "corporate average" shall be determined as provided in subsection(d). Each engine family shall have only one applicable standard. (6) The standard is applicable based on the engine displacement. Engines <225 cubic centimeters(cc) shall co ply with 12.0 g/Bhp-hr HC+NOx standard and engines 225cc and greater shall comply with the 10.0 g/Bhp-hr HC+NOx standard. (7) Grams per brake-horsepower-hour. (8) Although golf cart manufacturers must file an application of certification and comply with the administrative requirements outlined in the procedures to certify their vehicles for sale in California, they are not required to perform emissions testing.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, and 43107, Health and Safety Code. Reference: Sections 43013, 43018, and 43107, Health and Safety Code.

ATTACHMENT B

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RAYMOND B. GROCHOWSKI
CARY W. MERGELE
* NOT ADMITTED IN D.C.

RAYMOND PHILIP SHAFER *
COUNSEL

March 28, 1996

Jackie Lourenco
Manager, Off-Road Controls Section
Mobile Source Division
California Air Resources Board
9528 Telstar Avenue
El Monte, California 91731

Re: Joint Petition of Tecumseh Products Company and The Toro Company

Dear Ms. Lourenco:

As we discussed, enclosed please find a copy of the Joint Petition of Tecumseh Products Company and The Toro Company regarding CARB's Tier-I standards for snowthrowers and other wintertime products. We would appreciate CARB's expeditious consideration of the Joint Petition and we stand ready to provide any additional information you may require.

Very truly yours,

DUNAWAY & CROSS

Gary E. Cross

Enclosure

cc: Robert Cross (w/encl.)
Michael Carter (w/encl.)
Michael Terris, Esquire (w/encl.)

JOINT PETITION OF TECUMSEH PRODUCTS COMPANY AND THE TORO COMPANY TO THE CALIFORNIA AIR RESOURCES BOARD TO AMEND EMISSION STANDARDS FOR ENGINES USED IN SNOWTHROWERS AND OTHER WINTERTIME PRODUCTS UNDER THE EMISSION CONTROL REGULATIONS FOR 1995 AND LATER UTILITY AND LAWN AND GARDEN EQUIPMENT ENGINES

I. INTRODUCTION

Tecumseh Products Company ("Tecumseh") and the Toro Company ("Toro") respectfully submit this Joint Petition to the California Air Resources Board ("CARB") seeking amendment of the emission standards applicable to engines for snowthrowers and other exclusively wintertime products under the "California Exhaust Emission Standards and Test Procedures for 1995 and later Utility and Lawn and Garden Equipment Engines."[1] The Joint Petition is filed pursuant to Government Code § 11340.6 and Health and Safety Code §§ 39600 and 39601, in furtherance of the purposes of Health and Safety Code §§ 43013 and 43018. Four California servicing dealers, whose names and addresses appear at the conclusion, join in the Joint Petition and have provided individual statements of support.

Specifically, Tecumseh and Toro request that CARB remove the requirement that engines for snowthrowers and other wintertime products meet emission standards for hydrocarbons ("HC") and oxides of nitrogen ("NOx"), thereby leaving those products subject to emission standards for carbon monoxide ("CO"). As discussed herein, granting the Petition will (i) have no adverse impact upon California's air quality; (ii) provide a near-term benefit to California's air quality; (iii) preserve useful

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[1] These Tier-I emission standards and test procedures are hereinafter referred to as the "ULGE" regulations.

products for the citizens of California; (iv) avoid unnecessary economic injury to California small-business concerns; and (v) harmonize CARB's and EPA's regulation of engines for snowthrowers and other wintertime products.[2]

II. DISCUSSION

A. Snowthrower Emissions Inventory in California

The Technical Support Document ("TSD") accompanying CARB's ULGE regulations contains a detailed analysis of California emissions from utility and lawn and garden engines, including (i) equipment shipments, (ii) attrition/useful-life data, (iii) in-use population estimates, and (iv) horsepower, load-factor and annual-usage figures. Broken down by residential and commercial applications, these data permit an assessment of the relative contribution of different types of equipment to California's emissions inventory on a pollutant-by-pollutant basis. Exhibit 2-19 of the TSD depicts the total annual emissions in California from fourteen product categories of utility and lawn and garden equipment, including snowthrowers.

Exhibit 2-19 contains information revealing that California residential and commercial snowthrowers combined account for only .002 of the HC emissions and .003 of the NOx emissions from the State's utility and lawn and garden sector. Because snowthrower NOx emissions represent only four percent of snowthrower HC emissions, the HC-plus-NOx contribution from snowthrowers remains

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[2] Because snowthrowers are the most critical of these wintertime products, they are the focus of discussion in the remainder of this Joint Petition.

just slightly over .002 of the HC-plus-NOx total for the sector.[3]

B. Impact on Ozone Formation

The minuscule level of California HC and NOx emissions from snowthrowers becomes even less significant when considering ground-level ozone. As stated during the Board's meeting of December 14, 1990, "the snow blower produces emissions primarily in the winter, and as far as I know, the ozone problem does not occur in the winter." (Mr. Lazarias, Transcript p. 42). The same general point about wintertime products was made repeatedly at a Board meeting on May 14, 1992: "And I would think that from our ozone and nitrogen emission point of view, we'd be principally interested in [the products'] usage during the ozone seasons more so than, say, in the wintertime or in areas where ozone is not a problem." (Mr. Lazarias, Transcript p. 24); "[S]nowmobiles, for example, are operated at Lake Tahoe, which is not a severe air quality area ...." (Mr. Cross, Transcript p. 24); "for example you have things like snowmobiles, which are used in fairly remote areas...." (Mr. Cross, Transcript p. 29).

Last year, in modifying its initial regulatory proposal, EPA exempted engines for snowthrowers and other wintertime products from its Phase-I HC standard on these very grounds. Following is EPA's explanation:

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[3] According to Exhibit 2-19 of the TSD, total annual California emissions of HC and NOx from the lawn and garden sector are 24 million kilograms, of which all snowthrowers collectively represent only 54,406 kilograms, or .022 of the total.

> After considering the comments, the agency has concluded that the HC standard will be optional for snowthrowers. This is because, as is discussed in the preamble to the proposed rule (see 9 FR at 25416) and by industry comments, snowthrowers are operated only in the winter, which means that they do not measurably impact ozone nonattainment concentrations and thus need not be subject to stringent control requirements aimed at controlling ozone nonattainment. On a national level, ozone nonattainment is primarily a seasonal problem that occurs during warm sunny weather. Regulating HC and emissions from products used exclusively in the winter, such as snowthrowers, will not advance the Agency's mission to correct this seasonal problem.

60 Fed. Reg. 34591 (July 3, 1995)[4]

Given the fact that CARB had already adopted its ULGE regulations when EPA was formulating its Phase-I standards, EPA recognized "that California will be regulating HC emissions from snowthrowers, and today's decision should in no way prejudice California's efforts." Id. Petitioners certainly agree that EPA's decision does not prejudice California, but EPA's reasoning regarding the seasonality of snowthrower emissions is also true of California. Moreover, as discussed in Section C below, the absence of HC and NOx emission limits for snowthrowers at the national level leads to manufacturing and marketing realities that will affect California consumers and small businesses in several important respects.

CARB's decision not to regulate snowmobiles, which are recreational vehicles, also recognizes the role that seasonal

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[4] Although EPA's reasoning is equally applicable to NOx, the Federal Register discussion is limited to HC. However, Petitioners have been advised that EPA will issue a technical amendment to its Phase-I regulations to clarify that EPA has also removed the NOx requirement as applicable to snowthrowers.

factors rightfully play in regulatory decisionmaking at the federal or state level. Indeed, Mr. Cross's comments during the May 14, 1992 Board meeting regarding the use of snowmobiles, quoted earlier, are especially appropriate with regard to snowthrowers because of snowthrowers' vastly lesser emissions than snowmobiles.

CARB estimates the HC+NOx emissions contribution of snowmobiles at 34 tons per day. Snowthrowers, by contrast, produce about one-sixth of one ton per day, less than one-half of one percent of the snowmobile total. Although snowmobiles may see greater usage in non-urban areas than do snowthrowers, this geographic difference would not offset this huge emissions disparity, which, according to CARB, results primarily from a combination of engine size (3-5hp vs. 50-60hp), load factor (35 percent vs. 75 percent), and annual usage rates (27 hours vs. 98 hours). Petitioners therefore believe that eliminating the HC and NOx requirements for snowthrowers would be fully consistent with CARB's decision not to impose emissions limits on snowmobiles as recreational vehicles.[5] The principal difference is that snowthrowers would still generate CO-reduction benefits.

C. The Consequences of Dual Standards

EPA's decision to forego HC and NOx emissions limits for snowthrowers means that snowthrowers manufactured for sale

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[5] Petitioners recognize that snowmobile emissions could be subject to regulatory controls in the future. The fact that they have not been, however, appears to flow from their wintertime use more than any other factor.

throughout the country cannot be sold lawfully in California so long as California imposes the HC and NOx limits. But manufacturing and marketing realities make it economically infeasible to produce and distribute snowthrowers that are unique to the California market as a result of the additional HC and NOx requirements. Although California is an extremely significant state market for lawn and garden and utility equipment overall, it is a relatively minor market for snowthrowers, a market that cannot justify a separate California design, production, and marketing effort owing to the HC and NOx limits. The upshot is that the existence of California-only emission requirements for HC and NOx for snowthrowers will simply eliminate new snowthrowers from the California market.[6] Several adverse consequences will flow from this.

1. Small-business impact

Snowthrowers, particularly the larger two-stage snowthrowers powered by cleaner four-stroke engines, are generally sold by servicing dealers, who are typically family businesses. Although the impact on the California economy as a whole would be negligible, the elimination of new snowthrower inventory in California would severely harm certain lawn and garden and utility equipment dealers who rely, in varying degrees, on snowthrower sales for their economic livelihood.

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[6] The CO standards for two-stroke snowthrowers are currently not identical between EPA and California. Nevertheless, this Joint Petition addresses only the merits of removing the separate HC and NOx requirements in California.

The Western Auto store in Chester, California is a stark case in point. This is a small business located approximately 165 miles north of Sacramento. Sales of snowthrowers, although numbering only fifty or so units per year, are the foundation of this dealer's wintertime livelihood, representing some 75-80 percent of revenue during the four-month period November-February, and perhaps 50 percent of annual revenue. This small business, and others like it, could not be expected to survive without its snowthrower sales.

The Western Auto dealer in Susanville, a somewhat larger town about 60 miles east of Chester, would probably suffer less because it is a larger operation, but would still expect to lose up to ten percent of its business if it could not sell snowthrowers. Hangtown Tool Center in Placerville currently sells only about 10 units per year but had been counting on increasing this aspect of its business. And Rich's Small Engine Service, in South Lake Tahoe, estimates that it would lose 30 percent of its wintertime sales volume if it could not offer snowthrowers. Each of these dealers has a significant stake in the continued availability of snowthrowers and each supports this Joint Petition. (See attached statements.)

2. Consumer impact

It is not only these and other small businesses that depend on the continued availability of snowthrowers--their customers do as well. Considering that the retail price of a two-stage snowthrower runs between $1300-$2000, the decision to purchase is

likely based on true need, not on whim or impulse. If new snowthrowers are not available in California, it is natural to expect that current owners will repair and rebuild their uncontrolled units beyond their customary practice in order to extend their service life. To the extent that CO emissions from snowthrowers are an air-quality concern, slower turnover of unregulated snowthrower engines will work a detriment to CARB's efforts.

When repair and rebuild options become no longer viable, snowthrower owners will be forced to seek replacement units outside of California, with the Lake Tahoe environs across the state line in Nevada providing perhaps the most likely source. Assuming these out-of-state snowthrowers meet the EPA Phase-I limits, the effect on California's air will be the same as if the Joint Petition is granted, except that California residents will be induced to avoid California law, all the while resenting the inconvenience of having to purchase a familiar and necessary product outside the State. The option of manual snow removal is unrealistic in the areas north of Sacramento where snowfalls are heavy. And the prospect of greater commercial snow removal, using higher-polluting vehicular applications, is no benefit to California air or to its residents' pocketbooks.

The end result, Petitioners believe, will be a short-term loss of CO-reduction benefits with no long-term gain to California's air quality, accompanied by greater citizen expense, inconvenience, and frustration.

III. CONCLUSION

For the foregoing reasons, Joint Petitioners Tecumseh and Toro, joined by the below-listed servicing dealers, respectfully request that CARB amend the ULGE regulations by removing the requirement that engines for snowthrowers and other exclusively wintertime products meet emission standards for HC and NOx.

The Toro Company
300 West 82nd Street
Minneapolis, MN 55420

Tecumseh Products Company
100 East Patterson Street
Tecumseh, MI 49286

Western Auto Associate Store
168 Main
Chester, CA 96020

Rich's Small Engine Service
1012 Industrial Avenue
South Lake Tahoe, CA 96150

Hangtown Tool Center
673 Placerville Drive
Placerville, CA 95667

Western Auto Supply
2985 Riverside Drive
Susanville, CA 96130

March 28, 1996

California Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731

Dear Sir or Madam:

Please be advised that Rich's Small Engine Service joins in and supports the Joint Petition of Tecumseh and Toro regarding the California emission standards for snowthrowers and other wintertime products.

Dated: 3-26-96

Rich Dorman
Rich's Small Engine Service
1012 Industrial Avenue
South Lake Tahoe, CA 96150

California Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731

Dear Sir or Madam:

Please be advised that Hangtown Tool Center joins in and supports the Joint Petition of Tecumseh and Toro regarding the California emission standards for snowthrowers and other wintertime products.

Dated: 3-15-96

Linda Taylor
Hangtown Tool Center
673 Placerville Drive
Placerville, CA 95667

California Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731

Dear Sir or Madam:

Please be advised that Western Auto Associate Store joins in and supports the Joint Petition of Tecumseh and Toro regarding the California emission standards for snowthrowers and other wintertime products.

Dated: March 17, 1996

/Richard Hudson

Mr. Richard Hudson
Western Auto Associate Store
168 Main
Chester, CA 96020

California Air Resources Board
9528 Telstar Avenue
El Monte, CA 91731

Dear Sir or Madam:

Please be advised that Western Auto Supply joins in and supports the Joint Petition of Tecumseh and Toro regarding the California emission standards for snowthrowers and other wintertime products.

Dated: 3-15-96

Kevin Smith
Western Auto Supply
2985 Riverside Drive
Susanville, CA 96130