

State of California
AIR RESOURCES BOARD

Staff Report: Initial Statement of Reasons
for Proposed Rulemaking

PUBLIC HEARING TO CONSIDER THE ADOPTION OF THE NATIONAL SECURITY
EXEMPTION FOR MILITARY TACTICAL VEHICLES AND EQUIPMENT

Date of Release: **October 27, 1995**
Scheduled for Consideration: **December 14, 1995**
Agenda Item No.:

I. INTRODUCTION

The Air Resources Board (ARB or Board) staff is proposing to adopt provisions that would exempt military tactical vehicles and equipment from California emission standards and regulations applicable to on-road motor vehicles, and applicable to engines used in off-road vehicles and equipment. Such provisions would incorporate by reference the existing federal rules and guidelines providing for a national security exemption (see 40 Code of Federal Regulations (CFR) Parts 85, 89 and 90). This exemption from California standards is necessary for the military to maintain a uniform, combat-ready fleet worldwide. Maintaining a separate tactical fleet meeting California standards only could seriously impair the military's logistics for deploying tactical vehicles and equipment worldwide.

II. BACKGROUND

California continues to have the worst air quality and the most severe ozone problem in the nation. Hydrocarbon (HC) and oxides of nitrogen (NOx) emissions are major precursors to ozone formation. While ozone is the most pervasive problem in California urban areas, many of the cities are also in violation of air quality standards for particulate matter (PM) and carbon monoxide (CO). The Air Resources Board is the state's agency responsible for air quality in California. Since mobile sources account for about 60 percent of all ozone-forming emissions (NOx and HC) and for over 90 percent of all CO emissions, the ARB's major focus is on controlling emissions from both on- and off-road mobile sources. Among the significant regulations that the ARB has recently adopted are more stringent low-emission standards for light-duty and medium-duty vehicles (Low Emission Vehicle Program), progressively stringent two-tier emission standards for diesel farm and construction equipment over 175 horsepower, utility engines, and off-highway recreational vehicles/engines.

Under Title II of the federal Clean Air Act (CAA), the United States Environmental Protection Agency (U.S. EPA) has general responsibility for establishing uniform federal regulations for mobile sources. Under section 209 of the CAA, the states are, in general, preempted from adopting independent standards and regulations. However, given the extraordinary environmental conditions confronting California and the state's leadership in the control of mobile source emissions, Congress provided California special authority to request to adopt and enforce its own regulations for on-road motor vehicles and for engines used in off-road vehicles and equipment. (See CAA sections 209(b) and (e).) Congress is required to grant California such authority if certain conditions exist, including that California's standards and regulations are, in the aggregate, at least as stringent as applicable federal standards and regulations in protecting public health and welfare. Currently, California has received authorization (referred to under the CAA as waivers for on-road motor vehicles and as authorizations for off-road engines used in vehicles and equipment) to adopt its own emission standards and regulations for light-, medium-, and heavy-duty vehicles, and for utility and lawn and garden off-road engines under 25 horsepower and off-road heavy-duty diesel cycle engines over 175 horsepower. An authorization request is presently pending for recreational off-road vehicles.

While the California request for authorization to adopt the off-road heavy-duty diesel regulations was pending consideration by the U.S. EPA, the U.S. Department of Defense (DoD) raised concerns about California adopting different, more stringent standards than those that have been adopted by the U.S. EPA for similar engines. The DoD requested that the U.S. EPA condition any authorization issued to California on California granting national security exemptions to military tactical equipment. Concurrent with its request to the U.S. EPA, the DoD contacted California requesting that it consider such exemptions to the California regulations.

III. SUMMARY OF RECOMMENDED ACTION

This proposal would adopt exclusions/exemptions from applicable California emission standards and other regulations for military tactical vehicles. These exclusions/exemptions would be similar to those that have been adopted by the U.S. EPA. The staff recommends that the Board add sections 1905, 2400(c), and 2420(d) to Title 13, California Code of Regulations (CCR), which would respectively provide for the adoption of the national security exemption for on-road vehicles and for off-road engines used in vehicles and equipment that are defined as military tactical vehicles or equipment.

The staff proposes that "military tactical vehicles or equipment" be defined as an on-road motor vehicle or off-road vehicle or equipment owned by the U.S. Department of Defense and/or the U.S. military services and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations. The regulations would incorporate by reference the federal provisions providing for military vehicle exclusion and exemption. It would further provide for a California-only exemption that would be

automatically granted to vehicles and equipment that meet the military tactical vehicle and equipment definition and that have received a federal certificate of conformity with the federal regulations. The sections that would be incorporated by reference are 40 CFR Part 85, subpart R; Part 89, subpart J; and Part 90, subpart J. The ARB would defer to the U.S. EPA the administration of the program and granting of national security exemptions and exclusions. The DoD will be required to submit to the ARB a list of all vehicles and equipment that are excluded and or exempted under the above provisions and which are located in the State of California.

Besides the tactical vehicles and equipment, the military also uses in California an administrative fleet consisting of light-, medium-, and heavy-duty vehicles. Although vehicles owned by the military or by military personnel are not required to be registered in California (Vehicle Code Section 6701, 9101), the military has been procuring only ARB-certified non-tactical vehicles to be used in California and it has committed to the ARB staff that it will continue to do so in the future. Therefore, these vehicles would not be subject to the national security exemption and exclusion provisions.

IV. DISCUSSION

Military tactical vehicles and equipment include weapon systems used on the battle ground, portable equipment to support logistical and combat aircraft, vehicles to transport combat and support personnel during military operations, and other military equipment weapon systems. All of these vehicles/equipment must be capable of being deployed and maintained worldwide, in remote harsh environments, as well as in urban locations. Also, military technicians must be able to use common technical manuals and interchangeable parts to repair the equipment at any location. Most of these vehicles/equipment are designed to unique military specifications, but some are commercially designed.

Recognizing the unique military requirements of these vehicles and equipment, the U.S. EPA concluded that it may be difficult, burdensome, and contrary to national security interests to require that these vehicles and equipment meet federal new engine emissions standards. Consequently, the U.S. EPA has excluded military combat or tactical vehicles such as armor and/or weaponry from the federal motor vehicle regulations under 40 CFR 85.1703(a). In addition, the military tactical vehicles that do not qualify for exclusions may be granted national security exemptions by the U.S. EPA under the CAA, Section 203(b)(1), which states that any new motor vehicle or engine may be exempted for reasons of national security. Since this provision is so broad, in 1988, the U.S. EPA developed guidelines for National Security Exemption (NSE) procedures for fiscal years 1988 to 1995. These guidelines are applicable to motor vehicles that are not otherwise excluded because of their unique military design. Under the guidelines, the military is required to submit requests for NSEs to the U.S. EPA for specific tactical vehicles and their spare engines. The U.S. EPA grants a NSE under the condition that new or existing tactical vehicles must comply with the emission standards in effect in the first year of procurement, or reprocurement, unless tactical

vehicle mission objectives would be substantially impaired. The U.S. EPA then issues a certificate of conformity that will allow manufacturers who were awarded the contract for procurement to manufacture those vehicles, engines, or equipment. Since these guidelines expired in September 1995, the U.S. EPA is working on new NSE guidelines for on-road vehicles/engines for fiscal years 1996 to 2000.

Since emission standards and regulations for off-road heavy-duty diesel-cycle engines over 175 horsepower will be implemented beginning in 1996, both in California and nationally, the U.S. EPA is also presently working on similar NSE guidelines for military tactical off-road vehicles and equipment under 40 CFR Part 89. If the proposed NSE guidelines for off-road engines are not completed on time, the U.S. EPA will deal with NSE requests on a case-by-case basis. Under the federally proposed language, any nonroad engine which is used in a vehicle that exhibits substantial features ordinarily associated with military combat such as armor and/or permanently affixed weaponry and which will be owned and/or used by an agency of the federal government with responsibility for national defense, will be excluded from regulation for purposes of national security. Furthermore, manufacturers could request a national security exemption for any off-road engine which does not meet the conditions for exclusion. The request would have to state the purpose for which the exemption is required and be endorsed by an agency of the federal government charged with responsibility for national defense.

Presently, ARB regulations contain no exclusion for military tactical vehicles and equipment nor provision for national security exemptions. Without the such provisions in the California regulations, the military would have to comply with two different sets of requirements from the U.S. EPA and the ARB. This would preclude the military from maintaining a uniform, combat-ready fleet worldwide, and thereby impair the military's readiness for national defense. Consequently, the objective of this regulatory action is to align with the U.S. EPA's NSE and exclusion policies.

In addition to the proposal that the federal provisions providing for national security exclusion/exemptions be incorporated by reference, the staff is proposing that California-only exemptions be granted to certain vehicles and equipment, including those that are commercially available, that fall within the proposed definition of military tactical vehicles or equipment. These exemptions to the California regulations would be granted only to military tactical vehicles or equipment, as defined, that do not require a federal exemption because they meet all applicable federal emission standards and regulations. This special exemption provision from California emission standards and regulations is also necessary so that the military can provide for and maintain a uniform combat-ready fleet that is deployable worldwide. So that the ARB can track the different types of vehicles and equipment that will be excluded and exempt under the proposed amendments, the DoD would be required to submit to the ARB a list of all vehicles located in the State of California that are excluded and or exempted under the above provisions.

V. ISSUES OF CONTROVERSY

There are no known or anticipated issues of controversy with this proposed regulatory action.

VI. REGULATORY ALTERNATIVES

The only alternative that has been considered by staff is a requirement that all military tactical vehicles and equipment comply with California standards. However, it is apparent that this could impair the military readiness for national defense which staff believes is an overriding concern over the minor environmental impact associated with the exemption.

VII. AIR QUALITY, ENVIRONMENTAL, AND ECONOMIC IMPACTS

A. AIR QUALITY AND ENVIRONMENTAL IMPACTS

The staff believes that the military vehicle/equipment exemption would have a negligible adverse environmental impact on air quality. There are no other environmental impacts. The following analysis determines the air quality impact of those on-road vehicles and off-road vehicles and equipment used for tactical military purposes that could potentially be subject to ARB regulations if a California-only exemption provision was not allowed. The analysis also determines the emissions impact of the military vehicles and equipment designed to unique military specifications which would qualify for NSEs. The emissions impact of military vehicles and equipment that are permanently excluded from emissions regulations was not included in this analysis since those vehicles and equipment were never intended to be regulated.

Since the U.S. EPA grants a NSE under the condition that new or existing tactical vehicles must comply only with the emission standards in effect in the first year of the procurement contract, this analysis determines the impact of emission standards that will change during the period of the next contract between 1996 and 2001. After this contract expires, the military tactical vehicles and equipment will have to comply with the emission standards that will be in effect in the first year of the new contract. It is important to note that the federal and California emission standards for on-road heavy-duty vehicles (HDV) are aligned. Since the NOx standard will change from 5 g/bhp-hr to 4 g/bhp-hr in 1998, this analysis shows the impact if the military on-road vehicles did not comply with the lower standard in 1998. The impact on particulate matter (PM) emissions is not included in this analysis since the PM standard will not change for HDVs. For off-road engines above 175 horsepower, the federal and California NOx and PM standards effective in 1996 are the same. However, California will have more stringent NOx and PM standards effective in 2001. Therefore, this analysis determines the impact of exempting off-road military engines from the 2001 California standards. For utility engines under 25 horsepower, the federal and California NOx standard effective in 1996 is the same. However, the U.S. EPA's regulations for the

utility engines under 25 horsepower apply only to gasoline-powered engines, but California's regulations for this category include diesel-powered engines as well and therefore, California also has the PM standard. In addition, California will have more stringent NOx and PM standards effective in 1999. Therefore, this analysis determines the impact of exempting military engines under 25 horsepower from the California PM standard in 1996 and NOx and PM standards in 1999.

The total possible emissions increase for all vehicles/equipment that could fall under the exemption is 10.4 tons NOx/year, 1.9 tons PM/year, and 2.2 tons HC/year, or only 0.0013%, 0.0015%, and 0.00045% of the total mobile source inventory, respectively. Since mobile source emission estimates are usually high enough to be reported in tons/day, these estimates, reported in tons/year, clearly demonstrate the very minor air quality impact associated with the military vehicle/equipment exemptions. It is also important to note that these are worst case emission estimates and were done under the assumption that all of the emission increases would occur simultaneously and that all of the vehicles/equipment replaced every year would not meet the future standards. This scenario is highly unlikely. To the extent that the exclusions/exemptions have any air quality impact, overriding considerations exist for adoption of the proposals. As stated, the exclusions/exemptions are necessary to assure uniform deployment of vehicles and equipment for reasons of national security.

The following is the detailed breakdown of the estimated impact on emissions which would result from the exemption of both military- and commercially-designed vehicles/equipment:

On-Road Commercially-Designed Vehicles

- 1) The exemption of the commercially-designed military on-road heavy-duty vehicle (HDV) fleet in California (approximately 470 vehicles) from meeting the 1998 4 grams per brake horsepower-hour (g/bhp-hr) NOx standard (assuming that the fleet meets the 1996 5 g/bhp-hr NOx standard when the 1998 NOx standard is in effect) would result in an anticipated emission increase of 0.9 tons NOx/year.
- 2) The administrative fleet consisting of light/medium/heavy-duty vehicles is procured to California standards, and the military is not requesting an exemption for those vehicles. Hence, there would be no negative air quality impact for those vehicles.

On-Road Military-Designed Vehicles

- 1) The exemption of the military-designed on-road heavy-duty vehicle (HDV) fleet in California (approximately 16,000 vehicles) from meeting the 1998 4 g/bhp-hr NOx standard (assuming that the fleet meets the 1996 5 g/bhp-hr NOx standard when the 1998

Nox standard is in effect) would result in an emission increase of 1.1 tons NOx/year. Although the number of military-designed vehicles is much higher than those commercially designed, the emission impacts of both groups of vehicles are comparable since the military-designed vehicles have a very low mileage use per year compared to the commercially-designed vehicles.

Off-Road Commercially-Designed Equipment over 175 HP

- 1) The exemption of the California off-road commercially-designed military fleet (approximately 500 pieces of equipment) from meeting the 2001 5.8 g/bhp-hr NOx standard (assuming that the fleet meets the 1996 6.9 g/bhp-hr NOx standard when the 2001 standard is in effect) would result in an emission increase of 1.6 tons NOx/year.
- 2) The exemption of the California off-road commercially-designed military fleet from meeting the 2001 0.16 g/bhp-hr PM standard (assuming that the fleet meets the 1996 0.4 g/bhp-hr PM standard when the 2001 standard is in effect) would result in an emission increase of 0.35 tons PM/year.

Off-Road Military-Designed Equipment over 175 HP

- 1) The exemption of the California off-road military-designed fleet (approximately 650 pieces of equipment) from meeting the 2001 5.8 g/bhp-hr NOx standard (assuming that the fleet meets the 1996 6.9 g/bhp-hr NOx standard when the 2001 standard is in effect) would result in an emission increase of 1.7 tons NOx/year. Although the number of military-designed off-road equipment is higher than those commercially-designed, the emission impacts of both groups of engines are comparable since the military-designed equipment has a lower hour usage per year than the commercially-designed equipment.
- 2) The exemption of the California military-designed fleet from meeting the 2001 0.16 g/bhp-hr PM standard (assuming that the fleet meets the 1996 0.4 g/bhp-hr PM standard when the 2001 standard is in effect) would result in an emission increase of 0.4 tons PM/year.

Military Utility Engines under 25 HP

- 1) The exemption of the California military utility gasoline and diesel engines (approximately 2,600 pieces of equipment) from meeting the 1999 3.2 g/bhp-hr HC+NOx standard (assuming that the fleet meets the 1995 10 g/bhp-hr HC+NOx standard when the 1999 standard is in effect) would result in an emission increase of 5.1 tons NOx/year. and 2.2 tons HC/year.
- 2) The exemption of the California military utility diesel engines (approximately 1,500 pieces of equipment) from meeting the 1996 California 0.9 g/bhp-hr PM standard would result in an emission increase of 0.3 tons PM/year.

- 3) . The exemption of the California military utility diesel engines (approximately 1,500 pieces of equipment) from meeting the 1999 California 0.25 g/bhp-hr PM standard would result in an emission increase of 0.84 tons PM/year.

Presently, according to military representatives, virtually all of the vehicles/equipment in the administrative fleet meet California standards and the military is strongly committed to continue to buy California-certified vehicles, engines, and equipment if they meet the military needs. Besides being environmentally proactive, there is also a financial incentive for the military to do so since it is less costly to buy commercially available vehicle/equipment than to have special procurement contracts. If in the future, the commercially-designed equipment no longer meets the military needs, the military will apply to the U.S. EPA for a NSE for that type of vehicle/equipment.

Although the exclusions/exemptions will result in some decrease in anticipated emission reductions in the coming years, overriding considerations involving national security exist justifying the proposed amendments.

B. COST, COST-EFFECTIVENESS, AND ECONOMIC IMPACTS

The proposed exemption of military vehicles and equipment would have no associated costs. There would be no adverse economic impact on small businesses or to industry. In fact, these proposed amendments would help align California regulations with federal regulations and policies for the national security exemption of military tactical vehicles and equipment which is necessary to maintain a uniform, combat-ready fleet worldwide.

C. IMPACT ON THE ECONOMY OF THE STATE

The proposed exemption of military vehicles and equipment would not adversely affect the economy of the State. The objective of this regulatory action is to align with the U.S. EPA's NSE and exclusion policy, as stated above, which would provide a benefit for the military and the ARB.

VIII. REFERENCES

Air Resources Board Mail-Out #91-51, Staff Report: Initial Statement of Reasons for Proposed Rulemaking for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines and Equipment Engines, California Air Resources Board, November 22, 1991.

California Code of Regulations, Title 13, Sections 1905, 1956-1960.1, 2400 et seq., and 2420 et seq., State of California.

Clean Air Act, section 203, Federal Government.

Code of Federal Regulations, Title 40, Part 85, subpart R, sections 85.1702(a)(2), 1703(a)(3), 1704(b), 1708, and 7510; Part 86; Part 89, subpart B and subpart J, section 89.908; and 90, subpart B and subpart J, section 90.908; , Federal Government, July 1, 1994.

EMFAC7F, Predicted California Vehicle Emissions, California Air Resources Board.

Mobile Source Emission Standards Summary, California Air Resources Board, March 1994.

Vehicle Code, Sections 6701 and 9101, State of California, Department of Motor Vehicles.

Written Submissions and Personal Communication with Major Craig Teller, Office of the General Counsel, Department of the Army, and Ronald E. Tickle, Head, Shore Compliance Branch, Environmental Protection, Safety and Occupational Health Division, Chief of Naval Operations, Department of the Navy.



PROPOSED REGULATION ORDER

The regulatory amendments proposed in this rulemaking are shown in underline to indicate additions to the text.

Adopt section 1905, Title 13, California Code of Regulations, to read as follows:

1905. Exclusion and Exemption of Military Tactical Vehicles and Equipment.

(a) For purposes of this chapter, military tactical vehicle means a motor vehicle owned by the U.S. Department of Defense and/or the U.S. military services and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.

(b) This chapter shall not apply to vehicles defined as military tactical vehicles or to engines used in military tactical vehicles. This includes all vehicles and engines:

(1) Excluded from regulation under 40 CFR Part 85, subpart R, section 85.1703, which is incorporated by reference herein, and

(2) Exempted from regulations under the federal national security exemption, 40 CFR, subpart R, sections 85.1702(a)(2), 85.1704(b), 85.1708, and 85.1710, which are incorporated by reference herein. It shall also not apply to those motor vehicles or motor vehicle engines covered by the definition of military tactical vehicle, including commercially available vehicles, for which a federal certificate of conformity has been issued under 40 CFR Part 86, which is incorporated by reference herein.

(c) On January 1, 1997, the U.S. Department of Defense shall submit to the ARB a list of all vehicles that are excluded and or exempted under the above provisions and which are located in the State of California. If any additional vehicle types are added to the list during any calendar year after January 1, 1997, the U.S. Department of Defense shall update the list and submit it to the ARB by January 1 of the following year.

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

Amend section 2400, Title 13, California Code of Regulations, to read as follows:

2400. Applicability.

(a) through (b) [No Change]

(c)(1) For purposes of this article, military tactical vehicles or equipment means vehicles or equipment owned by the U.S. Department of Defense and/or the U.S. military services and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.

(2) This article shall not apply to engines used in off-road military tactical vehicles or equipment which have been exempted from regulations under the federal national security exemption, 40 CFR, subpart J, section 90.908, which is incorporated by reference herein. It shall also not apply to those vehicles and equipment covered by the definition of military tactical vehicle that are commercially available and for which a federal certificate of conformity has been issued under 40 CFR Part 90, subpart B, which is incorporated by reference herein.

(3) On January 1, 1997, the U.S. Department of Defense shall submit to the ARB a list of all vehicles and equipment that are exempted under the above provisions and which are located in the State of California. If any additional vehicle and equipment types are added to the list during any calendar year after January 1, 1997, the U.S. Department of Defense shall update the list and submit it to the ARB by January 1 of the following year.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43102 and 43104, Health and Safety Code. Reference: Sections 43013, 43017, 43018, 43101, 43102, 43104, 43105, 43150-43154, 43205.5 and 43210-43212, Health and Safety Code.

Amend section 2420, Title 13, California Code of Regulations, to read as follows:

2420. Applicability.

(a) through (c) [No Change]

(d)(1) For purposes of this article, military tactical vehicles or equipment means vehicles or equipment owned by the U.S. Department of Defense and/or the U.S. military services and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.

(2) This article shall not apply to engines used in off-road military tactical vehicles or equipment which have been exempted from regulations under the federal national security exemption, 40 CFR, subpart J, section 89.908, which is incorporated by reference herein. It shall also not apply to those vehicles and equipment covered by the definition of military tactical vehicle that are commercially available and for which a federal certificate of conformity has been issued under 40 CFR Part 89, subpart B, which is incorporated by reference herein.

(3) On January 1, 1997, the U.S. Department of Defense shall submit to the ARB a list of all vehicles and equipment that are exempted under the above provisions and which are located in the State of California. If any additional vehicle and equipment types are added to the list after January 1, 1997, the U.S. Department of Defense shall update the list and submit it to the ARB by January 1 of the following year.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43102 and 43104, Health and Safety Code. Reference: Sections 43013, 43017, 43018, 43101, 43102, 43104, 43105, 43150-43154, 43205.5 and 43210-43212, Health and Safety Code.

