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Comments of the
American Automobile Manufacturers Association
on the
Proposed Modifications to
California Air Resources Board
Mail-Out #93-59
Regarding
Evaporative Emission Test Procedures
February 10, 1994

Good morning. My name is Marcel Halberstadt, and I am speaking on behalf of the American Automobile Manufacturers Association. AAMA is a trade association representing Chrysler, Ford, and General Motors, the domestic manufacturers of passenger cars and trucks. I have a relatively brief statement to make regarding the changes the Board is considering to the rules for enhanced control of evaporative emissions from motor vehicles. We appreciate this opportunity to contribute to the ongoing efforts to improve air quality in California.

AAMA member companies believe that the improved evaporative emissions control systems that will be required on motor vehicles by this rulemaking are among the most cost effective opportunities for mobile source VOC reductions during the summer ozone season. We would like to commend the efforts undertaken by the staff to revise these rules to eliminate the many detailed differences that existed between earlier versions, and the federal rules that were adopted by the EPA in March of 1993. These changes will help us to deliver vehicles that dramatically improve evaporative emissions performance at the least cost to our customers.

AAMA member companies have been working closely with the staff throughout the past year to improve the enhanced evaporative emissions test procedures, which were originally adopted by the board in 1990. As you are aware, these procedures incorporated a significant number of new equipment and measurement technologies, which are used to execute a very complex testing process taking over five days to complete. In the time since these rules were originally adopted, we have made significant progress in developing the equipment and processes to conduct these tests, as well as in obtaining practical experience at executing them.

AAMA member companies have committed significant resources to resolving those technical issues which remain. We have been working with the staffs of both CARB and EPA through the American Industry-Government Emissions Research forum to identify and complete projects which will improve the repeatability and precision of these measurement procedures. AAMA member companies believe that the testing technology, specifications, requirements, and processes are in some areas problematic and still actively

evolving. We have not yet identified a comprehensive set of the best practices.

In the interest of providing a workable framework for operating in the next few years, we request that the Board adopt specific language providing adequate discretion for the Executive Officer in interpreting the testing requirements. Attached with the written copy of this testimony is proposed regulatory language. It is critical to provide flexibility that recognizes the underlying intent, not just the letter of the regulation, to assure that a smooth transition is made between the technical staff and the certification groups. We believe providing the Executive Officer the flexibility to allow revised and improved testing methodologies is also essential to the timely approval of our certification plans and test data during the phase-in of these control systems. As the remaining technical issues are resolved, it may be appropriate to consider a final set of revisions to the regulations at some later date. The attached proposed regulatory language would allow this to be done at the Executive Officer's discretion.

An objective of the test procedure changes has been to align California's evaporative testing procedures with EPA's procedures. Many changes that are being proposed by Staff help to accomplish this objective, though some differences still remain. After today, we will have two almost identical test procedures; but manufacturers must still develop and certify to two separate and very lengthy procedures. Industry, EPA, and CARB need to continue to work together to establish a common procedure. Also, as the prior record indicates, AAMA still remains concerned about the methodology for measuring running loss emissions.

In summary, we appreciate the opportunity to work cooperatively with the Staff to improve the enhanced evaporative emissions rules. We look forward to continuing this cooperative effort to resolve the remaining challenges in improving the testing technology and processes, and to implementing the advanced evaporative emissions control technology on the vehicles sold in California.

That concludes my remarks. If you have any questions, I would be pleased to try to answer them.

EXECUTIVE OFFICER DISCRETION FOR RESOLVING TECHNICAL ISSUES

Proposed Change to Section 1. page 1

Carry-over of 1995 model year data will be allowed if the Executive Officer determines that the carry-over data will adequately represent the performance of the vehicle to be certified. Applications for carry-over must be accompanied by an engineering analysis demonstrating that the durability and emissions of the vehicle for which certification is being sought will be adequately represented by a certified platform/powertrain/fuel tank combination application.

The Executive Officer shall approve alternate procedures if a manufacturer can provide evidence that a significant technical issue(s) exists with the adopted procedure or a manufacturer can provide evidence that the effectiveness of the evaporative emission system is not diminished.

Supporting Rationale

The above change is deemed necessary in order to quickly resolve technical issues resulting from unforeseen circumstances. The testing technology, specifications, requirements and processes are problematic and are still in a state of active evolution. In order to certify product in a timely manner, Industry and Government must cooperatively work together and allow the use of alternative procedures.

94-2-1
2/10/94

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STATEMENT OF THE
ASSOCIATION OF INTERNATIONAL AUTOMOBILE MANUFACTURERS, INC.
BEFORE THE CALIFORNIA AIR RESOURCES BOARD
REGARDING AMENDMENTS TO THE EVAPORATIVE EMISSION REGULATIONS
FOR 1995 AND LATER MOTOR VEHICLES

FEBRUARY 10, 1994

Good Morning, I am Dale Kardos, of the Association of International Automobile Manufacturers (AIAM). AIAM is a non-profit trade association that represents U.S. importers, distributors, and manufacturers of passenger cars and light trucks produced both here and abroad.¹ Nearly half of these vehicles are manufactured in new American plants established by AIAM companies in the last decade.² We welcome the opportunity to offer a brief statement on the proposed amendments before the Board today.

Our members worked closely with the Environmental Protection Agency (EPA) in the development of the Agency's test procedure. While not in total agreement with all aspects of EPA's rulemaking, we do endorse the concept of having essentially one test procedure apply nationwide to reduce complexity in the design and production of motor vehicles for sale in the U.S.

¹ AIAM represents: American Honda Motor Co., Inc.; American Isuzu Motors Inc.; American Suzuki Motor Corporation; BMW of North America, Inc.; Fiat Auto U.S.A., Inc.; Hyundai Motor America; Kia Motors America, Inc.; Land Rover North America; Lotus Cars USA; Mazda Motor of America, Inc.; Mitsubishi Motor Sales of America, Inc.; Nissan North America, Inc.; Porsche Cars North America, Inc.; Rolls Royce Motor Cars Inc.; Subaru of America, Inc.; Toyota Motor Sales U.S.A., Inc.; Volkswagen of America, Inc.; and Volvo North America Corporation.

² AutoAlliance International, Inc., Flat Rock, MI; Diamond-Star Motors Normal, IL; Honda of America Mfg., Inc. Marysville, OH, East Liberty OH; New United Motor Manufacturing Co., Fremont, CA (NUMMI); Nissan Motor Manufacturing Corp. USA, Smyrna, TN; Subaru-Isuzu Automotive, Inc., Lafayette, IN; Toyota Motor Manufacturing, U.S.A, Inc., Georgetown, KY

For that reason we support the staff's amendments to commonize the ARB procedure with that adopted by EPA. Moreover, we are appreciative of the staff's willingness to work with manufacturers to allow early use of the 1996 model year procedures in 1995. We also would like to thank the staff for allowing carryover of data from the 1995 model year procedure for 1996 and later years in response to AIAM's request last year. This will allow those manufacturers who have already designed vehicles to the 1995 CARB procedure maximum flexibility in meeting these requirements.

Thank you for the opportunity to express our views. If you have any questions, I would be happy to answer them.



**Engine
Manufacturers
Association**

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94-2-1
2/10/94

XC: Brd mbrs
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JB MSD

January 27, 1994

Ms. Susan Kwan
California Air Resources Board
Mobile Sources Division
9528 Telstar Avenue
El Monte, CA 91731

Dear Ms. Kwan:

The Engine Manufacturers (EMA) Association is a trade association for worldwide manufacturers of internal combustion engines. Our membership includes all of the major manufacturers of U.S. heavy-duty on-highway engines. Therefore, we have an interest in Proposed Rule #93-59, CARB Evaporative Emission Test Procedures.

CARB staff has acknowledged that the proposed regulation is not intended to require evaporative testing for CNG engines. In fact, the proposal does not mention CNG-fueled vehicles at all. Nevertheless, we believe it would be beneficial to clarify the matter by specifically mentioning this exclusion. We suggest that the page 1 definition be changed as follows:

"These standards and test procedures do not apply to motor vehicles which are exempt from exhaust emission certification, petroleum-fueled diesel vehicles, CNG-fueled vehicles, or hybrid electric vehicles that have sealed fuel systems which can be demonstrated to have no evaporative emissions."

In clarifying Rule #93-59, this exemption from standards and testing requirements would confirm both existing practice, existing California and federal law, and the intent of this proposal and federal law.

CNG-powered heavy-duty vehicles in California or in the 49 states at present are not required to meet evaporative emission standards, nor do they undergo evaporative emissions testing. As last amended, California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles does not include CNG-fueled vehicles among those subject to evaporative emission standards and testing requirements:

"These standards and test procedures are applicable to all new 1978 and subsequent model gasoline-fueled, 1983 and subsequent model liquefied petroleum gas (LPG)-fueled, and 1983 and subsequent methanol-fueled passenger cars, light-duty trucks, medium-duty vehicles, hybrid electric vehicles, and motorcycles. These standards and test procedures do not apply to motor vehicles which are exempt from exhaust emission certification or

petroleum-fueled diesel vehicles or hybrid electric vehicles that have sealed fuel systems which can be demonstrated to have no evaporative emissions."

This amendment was adopted to align California standards and procedures for evaporative emissions with federal regulations. Title 40, Code of Federal Regulations, Part 86, Subparts A and B, adopted July 1, 1989, also does not include CNG-fueled vehicles as those subject to standards and testing procedures.

Similarly, new federal law does not include CNG-fueled vehicles. Since the stated purpose of Rule #93-59 is to align with (new) federal regulations, CNG-fueled vehicles should not be required.

CNG vehicles constitute a small but growing segment of the California heavy-duty on-highway market. California regulatory policy has made reductions in NOx emissions a priority. EMA believes that the NOx emissions reductions that CNG engines may achieve indicate that regulatory practice and policy should do nothing to discourage their use in California.

Requiring the in-shed test procedures to test evaporative emissions of CNG-fueled heavy-duty vehicles would be an obstacle to the use of CNG vehicles. It would create an extra burden of cost on the operator of a vehicle fueled by such an engine, and therefore act as a disincentive for purchasing it.

The testing requirements should not be applied to gaseous-fueled vehicles with sealed systems. Refueling emission control systems are designed to prevent or minimize the leakage of fuel vapors during the refueling process. Sealed gaseous fuel systems are not likely to have leaks in the refueling connection since gaseous fuels such as CNG are stored and transferred under high pressures. Any leak in the vehicle fuel system or refueling transfer lines and connections would result in a rapid fuel loss requiring prompt repairs. Thus, imposing additional testing requirements on CNG-fueled vehicles with sealed systems are not necessary. Moreover, the test procedures in the proposed regulation as written today are not even applicable to gaseous-fueled vehicles.

For all these reasons, CNG vehicles should be specifically exempted in this rule. Please do not hesitate to call us if you would like to discuss this further.

Sincerely,



Glenn F. Keller
Executive Director

94-2-1

2/10/94

HONDA
AMERICAN HONDA MOTOR CO., INC.
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STATE OF CALIFORNIA
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JS TAC
 AS Legal
 JB MS D

AHCERT-940140

February 7, 1994

Board Secretary
 Air Resources Board
 P.O. Box 2815
 Sacramento, CA 95812

Dear Sir:

Enclosed are the comments of Honda Motor Co., Ltd. regarding CARB
 Mail-Out #93-59.

Yours truly,

AMERICAN HONDA MOTOR CO., INC.



Brian Gill
 Assistant Vice President
 Product Regulations Compliance, Certification

BG/jsb

Enclosure(s)

jsb c:\wpwin\brian.wp1

COMMENTS OF HONDA MOTOR CO., LTD.
REGARDING
CARB MAIL-OUT #93-59

Honda appreciates the opportunity to provide our comments. We understand ARB staff's efforts to harmonize with the new evaporative emission regulations which have been published by EPA. However, some of the differences which would remain in the test conditions and equipment requirements between ARB and EPA could increase manufacturers' burden which may result in a greater number of tests and test vehicles even if the same control systems and designs are applied for both California and Federal vehicles.

We strongly request that both EPA and ARB accept the carry-across of durability data from systems designed to meet the other organization's requirements. Also a single calibration requirement for test equipment maintenance should be adopted to reduce the unnecessary burden as much as possible.

We would like to appeal especially for ARB's consideration of the following point. ARB proposes the new correction factor to generate the fuel tank temperature profile based on on-road driving for the running loss test. The correction factor $[T(i) - T_o]$ should be constantly added to 105 degrees F as the EPA procedure specifies (but 95 degrees F for EPA instead of 105 degrees F). This means that ARB essentially requires 105 degrees F as the initial fuel tank temperature for all vehicles.

The proposed regulation allows that the initial fuel temperature for the running loss test may be less than 105 degrees F if the manufacturer is able to provide data justifying a lower initial temperature during a 105 degree F day. However Honda is very concerned that we shall be unable to encounter such hot days at places where all required data to justify the lower temperature can be acquired.

As you can see from the climatological data collected from July 1986 to June 1989 in California (attached), there would be very few opportunities to encounter a 105 degree F day. Honda believes that heat insulation applied around the vehicle fuel tank is one of the most effective means to control evaporative emissions from in-use vehicles by reducing fuel temperatures. If we have no opportunity to demonstrate a lower initial temperature during a 105 degree F day, we must consider other control techniques which might be more expensive while removing the insulation materials.

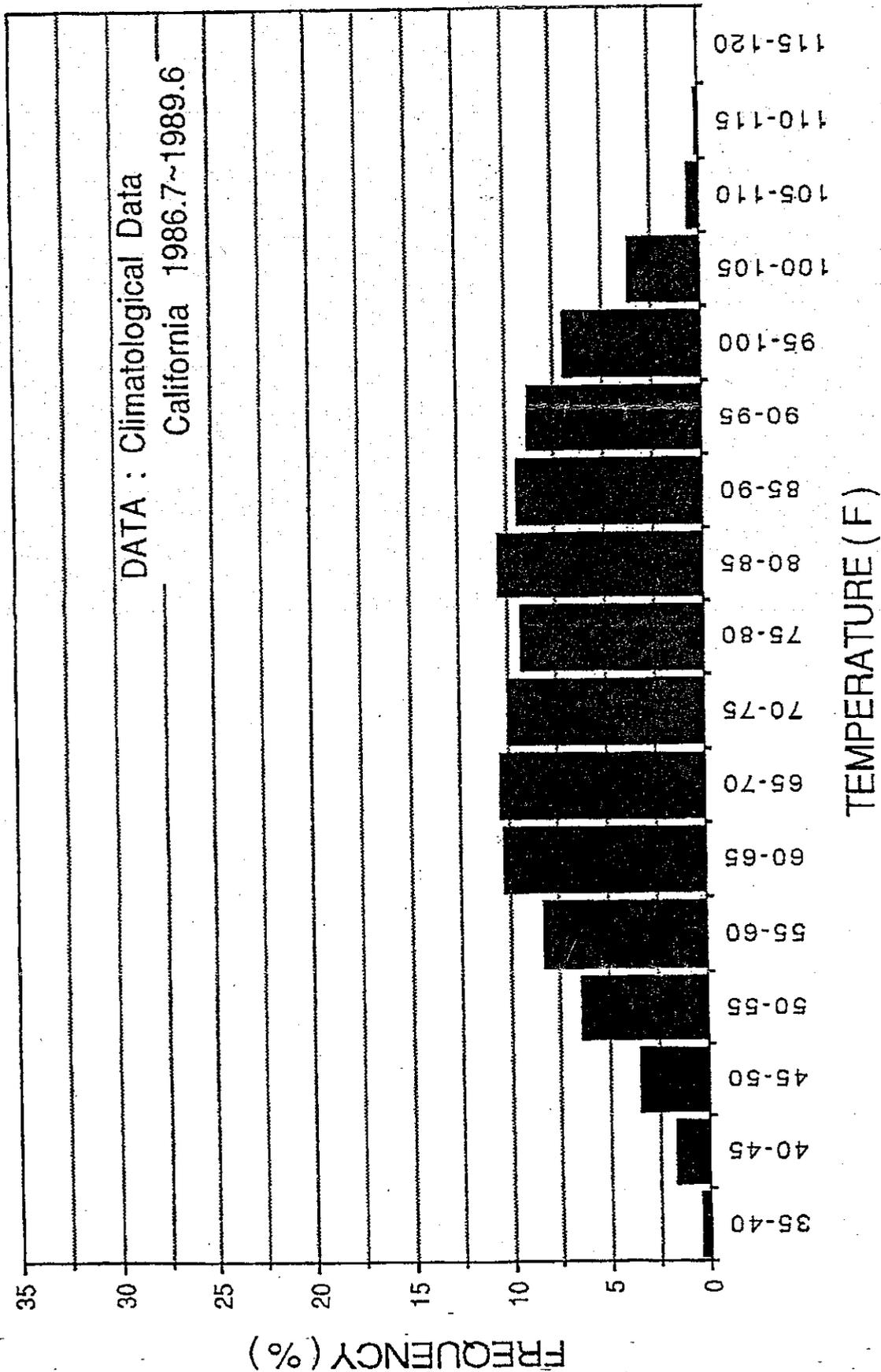
Therefore Honda thinks that the provision for lowering the initial fuel temperature for the running loss test may not be practical resulting in a requirement which may ignore the effectiveness of the insulated fuel tanks.

Honda requests ARB to allow the testing needed for the justification of lower initial temperatures to be conducted in the laboratory. For example, the initial temperature could be demonstrated by showing the maximum fuel temperature during the diurnal test cycle and/or other engineering evaluation.

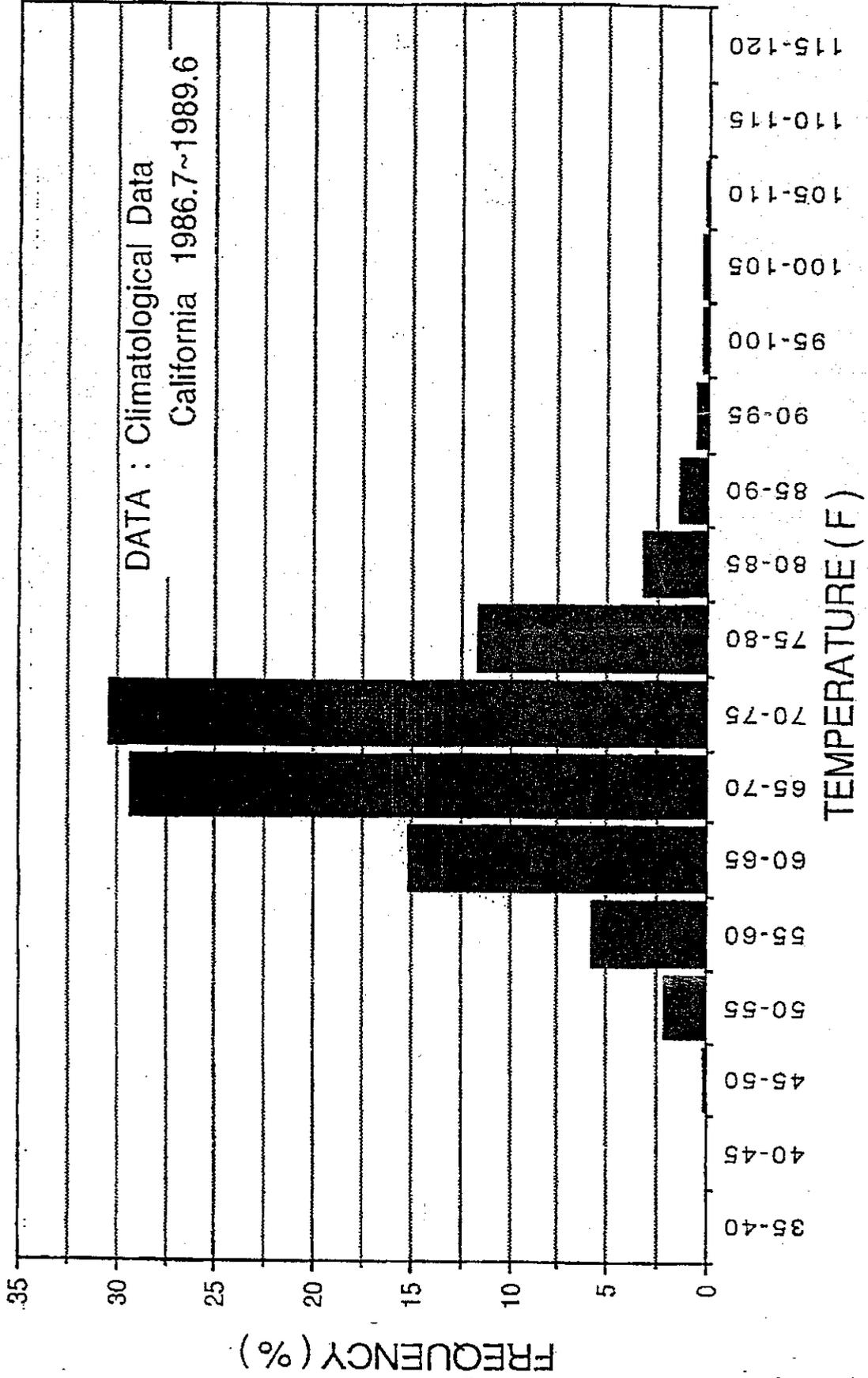
YEAR	SACRAMENTO			LOS ANGELES			SAN DIEGO		
	MAX	MIN	AVE	MAX	MIN	AVE	MAX	MIN	AVE
15-20	0	0	0	0	0	0	0	0	0
20-25	0	0.3649635	0	0	0	0	0	0	0
25-30	0	2.2810218	0	0	0	0	0	0	0
30-35	0	6.8430656	0.4562043	0	0.2737226	0	0	0.4562043	0
35-40	0.4562043	11.861313	2.4635036	0	1.6423357	0	0	2.4635036	0
40-45	1.6423357	14.142335	6.1131386	0	7.1167883	0.2737226	0	6.1131386	0.1824817
45-50	3.5583941	17.700729	10.857664	0.0912408	15.693430	2.5547445	1.0036496	11.040145	2.0985401
50-55	6.3868613	23.357664	11.040145	2.0985401	20.437956	9.3978102	5.9306569	13.959854	7.1167883
55-60	8.3029197	16.970802	13.959854	5.7481751	28.467153	18.430656	16.697080	12.956204	20.164233
60-65	10.218978	5.6569343	12.956204	15.054744	23.813868	31.569343	28.923357	15.237226	28.558394
65-70	10.401459	0.8211678	15.237226	29.288321	2.4635036	30.748175	31.021897	12.043795	31.021897
70-75	9.9452554	0	12.043795	30.383211	0.0912408	5.4744525	12.043795	9.7627737	9.1240875
75-80	9.3065693	0	9.7627737	11.587591	0	1.0036496	12.043795	9.7627737	1.0948905
80-85	10.310218	0	4.6532846	3.1934306	0	0.2737226	2.9197080	4.6532846	0.5474452
85-90	9.3978102	0	0.4562043	1.3686131	0	0.2737226	0.6386861	0.4562043	0.0912408
90-95	8.7591240	0	0	0.5474452	0	0	0.3649635	0	0
95-100	7.0255474	0	0	0.2737226	0	0	0.2737226	0	0
100-105	3.6496350	0	0	0.2737226	0	0	0.0912408	0	0
105-110	0.5474452	0	0	0.0912408	0	0	0.0912408	0	0
110-115	0.0912408	0	0	0	0	0	0	0	0
115-120	0	0	0	0	0	0	0	0	0
TOTAL									

SACRAMENTO DAILY MAXIMUM TEMPERATURE

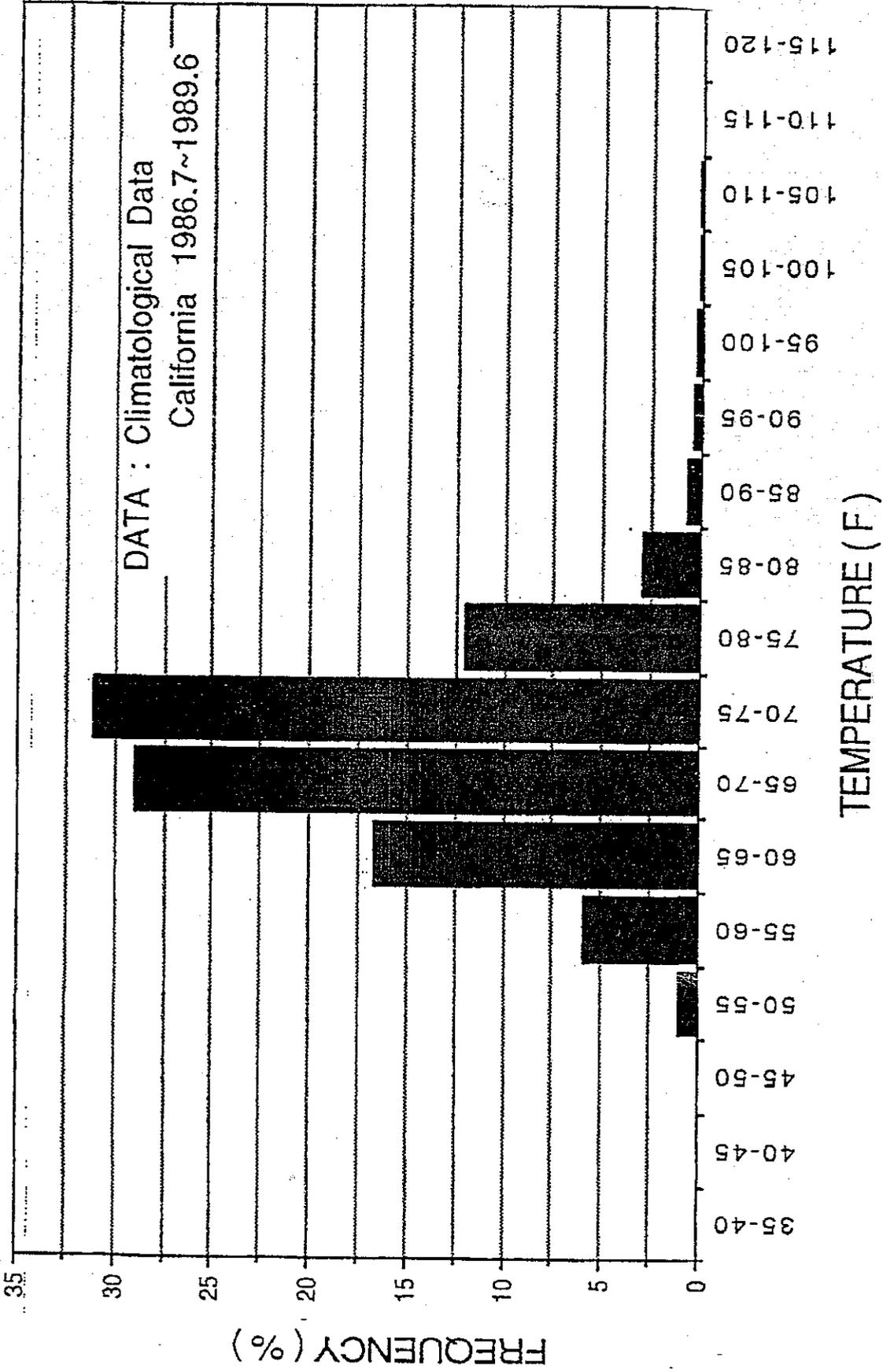
DATA : Climatological Data
California 1986.7~1989.6



LOS ANGELES DAILY MAXIMUM TEMPERATURE



SAN DIEGO DAILY MAXIMUM TEMPERATURE





BY APPOINTMENT
TO HIS MAJESTY
THE QUEEN
MANUFACTURERS OF ROVER CARS
LAND ROVERS AND RANGE ROVERS
ROVER GROUP LTD COVENTRY



BY APPOINTMENT
TO HIS MAJESTY THE QUEEN
MANUFACTURERS OF
LAND ROVERS AND RANGE ROVERS
ROVER GROUP LTD COVENTRY



BY APPOINTMENT
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ROVER GROUP LTD COVENTRY



BY APPOINTMENT
TO HIS MAJESTY THE QUEEN
MANUFACTURERS OF RANGE ROVERS
LAND ROVERS AND RANGE ROVERS
ROVER GROUP LTD COVENTRY

ROVER GROUP



February 2, 1994

STATE OF CALIFORNIA
AIR RESOURCES BOARD
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BY BOARD SECRETARY

XC: Brad Mbrs
JS TAC
AS Legal
JB MSD

Board Secretary,
Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Subject: Rover Group Comments on Revised Evaporative
Emission Regulations

Reference: ARB Mail-Out #93-59

Dear Board Secretary:

Enclosed please find 20 copies of Rover Group's comments on the revisions to California's evaporative emissions regulations and test procedures that are proposed in ARB Mail-Out #93-59, and are the subject of the February 10, 1994 Board hearing.

Essentially, Rover is asking the Board to apply the definition of small volume manufacturer that is found in the Low Emission Vehicle and the On Board Diagnostic II regulations (i.e. a three year rolling average under 3,000 sales in California) to these enhanced evaporative emissions regulations, to provide a consistent treatment across all of ARB's array of emissions regulations.

If you have any questions on this matter please feel free to call me on (301) 731-8709 or you can reach me by fax on (301) 731-5408.

Sincerely,

Dennis T. Johnston
Manager, Regulatory Affairs

cc: Mr. Steve Albu
Mr. Michael Carter

Enclosures

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94-2-1
2/10/94

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ROVER GROUP COMMENTS TO ARB MAIL-OUT #93-59, "NOTICE OF PUBLIC HEARING TO CONSIDER ADOPTION OF AMENDMENTS TO REGULATIONS REGARDING EVAPORATIVE EMISSION STANDARDS AND TEST PROCEDURES APPLICABLE TO 1995 AND SUBSEQUENT MODEL-YEAR PASSENGER CARS, LIGHT-DUTY TRUCKS, MEDIUM-DUTY VEHICLES AND HEAVY-DUTY VEHICLES"

Rover Group, Ltd., is the UK manufacturer of Land Rover 4x4 medium duty, multipurpose passenger vehicles. Rover currently qualifies for small volume manufacturer (SVM) status, and has since the introduction of the Range Rover in the U.S. market in the 1987 model year.

The regulations included in Mail-Out #93-59 for enhanced evaporative emission control include a provisions to delay these requirements for SVM's until the final year of the phase-in, when all vehicles produced by all manufacturers must meet the more stringent evaporative controls. Rover applauds this effort, which is consistent with the approach used in many of ARB's regulations.

However, we note that the definition of SVM for the purposes of these enhanced evaporative emission requirements is not the same as that used in ARB's other recently established technology forcing regulations for Low Emission Vehicles (LEVs) and On Board Diagnostics II (OBD II). In the LEV and OBD II rules, the criteria for SVM status is that of a three year rolling average being under 3,000 units. This allows for changes in market demand that would be difficult for manufacturers to foresee and overcome on short notice.

Rover Group will be expanding its vehicle line-up for 1995 and will include Defender 90's and Discovery's along with our current Range Rover models. In addition, our U.S. distribution division, Land Rover North America, is actively recruiting dealers nationwide to establish "Land Rover Centres" as low overhead, one-stop shopping areas for world-class 4x4 products. This will increase Land Rover exposure and sales potential in California (as well as other states) and will result in increased job opportunities in Land Rover North America's West Coast Regional Office in Aliso Viejo, California, and, most importantly will result in numerous jobs in these new, stand alone Dealerships as well as jobs in the Building Industry during their construction.

A consistent SVM definition in all of ARB's regulations, incorporating the rolling average approach, would eliminate a potential scenario where Rover might have to artificially restrict our California sales volumes in the near term due to the vagaries of the marketplace. Such a restriction would make the concept of Land Rover Centres less attractive to our California Dealers and could result in little or no positive impact on the economy in California as well as Land Rover North America's financial future as compared to the volume-unconstrained situation.

In conclusion, Rover hopes that the Boards's long standing tradition of recognizing the importance of a clean environment working hand in glove with a strong economy will allow you to look favorably on our comments.