

(c) If assessment of administrative costs is considered appropriate after review by the AGC, the contracting officer shall make a written demand on the contractor for administrative costs. The written demand shall describe the basis for the assessment and the cost computations. The same demand letter may be used to assess administrative costs and any excess costs. If the contractor fails to make payment after receiving a contracting officer's final decision, the contracting officer shall follow the procedures in Subpart 1332.6 and FAR Subpart 32.6 to collect the amount owed the Government.

(d) The recovery of excess or administrative costs does not preclude the Government from exercising other rights or remedies which it may have by law or under the terminated contract.

PART 1352-SOLICITATION PROVISIONS AND CONTRACT CLAUSES

21. Part 1352 is amended by adding a new Subpart 1352.2 as follows:

Subpart 1352.2—Texts of Provisions and Clauses

1352.219-1 Women-owned small business sources.

As prescribed in 1319.7003, insert the following provision:

Women-Owned Small Business Sources (May 1985)

The contractor agrees to develop a list of qualified bidders that are women-owned small businesses. The Small Business Administration Procurement and Automated Source System (PASS) and the Minority Vendor Profile System (MVPS) may be used for this purpose. The contractor may contact the Department of Commerce, Office of Small and Disadvantaged Business Utilization (OSDBU) for assistance.

The Contractor shall provide opportunities for women-owned small businesses to compete for subcontracts by making information on forthcoming opportunities available.

Where the clause "Small Business and Small Disadvantaged Business Subcontracting Plan" is required in accordance with FAR 19.708(b), the contractor shall include qualified women-owned small businesses in the subcontracting plan.

(End of Provision)

1352.233-2 Service of protest.

As prescribed in 1333.106, insert the following provision:

Service of Protest (Jan. 1985) (Deviation FAR 52.233-2)

Protests, as defined in § 33.101 of the Federal Acquisition Regulation, shall be served on the Contracting Officer and the Contract Law Division of the Office of the

Assistant General Counsel for Finance and Litigation by obtaining written and dated acknowledgement of receipt from the Contracting Officer or the head of the contracting office or designee and from the Contract Law Division of the Office of the Assistant General Counsel for Finance and Litigation located at the U.S. Department of Commerce, Herbert C. Hoover Building, Room H5882, 14th St. between Pennsylvania and Constitution Avenues, NW., Washington, DC 20230.

[Insert the address of the contracting officer or refer to the number of the block on the Standard Form 33 or 1442, etc., where the address of the contracting office is located.]

(End of Provision)

[FR Doc. 86-9053 Filed 4-22-86; 8:45 am]

BILLING CODE 3510-17-M

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 192 and 195

[Amdts. 192-51 and 195-37; Docket No. PS-86]

Transportation of Gas or Hazardous Liquid by Pipeline; Updating Steel Line Pipe Specifications

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Final rule.

SUMMARY: These amendments update the existing incorporation by reference of the American Petroleum Institute (API) specifications for steel line pipe, API 5L, 5LS, and 5LX, by adopting the 1985 edition of API Specification 5L for gas and hazardous liquid pipelines. API 5L, 5LS, and 5LX have been consolidated into one specification by the API. Editions prior to the 1985 edition are out of print, although provisions are made for their appropriate use.

EFFECTIVE DATE: May 23, 1986.

FOR FURTHER INFORMATION CONTACT: William A. Gloe (202) 426-2082, regarding the content of this amendment, or the Dockets Branch (202) 426-3148, regarding copies of the amendment or other information in the docket file for this proceeding.

SUPPLEMENTARY INFORMATION:

Background

RSPA published a Notice of Proposed Rulemaking in the Federal Register on November 27, 1985 (50 FR 48809), proposing to adopt the 1985 edition of API Specification 5L for line pipe and providing the following information:

Parts 192 and 195 incorporate by reference the 1980 editions of API Specifications 5L (Line Pipe), 5LS (Spiral-Weld Line Pipe), and 5LX (High-Test Line Pipe). In Part 192, each specification is included among "listed specifications" which must be followed in pipe manufacture to qualify steel pipe for use in gas pipelines. In Part 195, the specifications serve to denote allowable design factors for steel pipe. Under both parts the specifications are used for determining yield strength when specified minimum yield strength is unknown.

These API specifications have been the most predominantly used specifications for steel line pipe in the industry and have been maintained separately to identify different grades and types of pipe as they were originally developed. In 1983, the three specifications were consolidated into one by the API, using the identification, API Specification 5L, and the title, "API Specification for Line Pipe." All grades and types of steel line pipe are now combined in the one specification. Since 1983, API 5L has been revised to incorporate editorial changes in the 1984 edition, and recently in the 1985 edition, to provide requirements for a higher strength X80 grade (80,000 psi specified minimum yield strength).

Comments on the Notice

All comments received by RSPA in response to the notice were favorable for adoption of the 1985 edition of API Specification 5L without exception or condition. Comments were received from the Battelle Columbus Laboratories, the Champlin Petroleum Company, the Interstate Natural Gas Association of America, the Michigan Department of Commerce, Mountain Fuel Resources, Inc., Mountain Fuel Supply Company, the Northern Natural Gas Company, the Ohio Gas Association, Pacific Gas and Electric, the Southern California Gas Company, Tennessee Gas Pipeline Company, Texas Eastern Pipeline Company, the Transcontinental Gas Pipeline Company, Washington Gas, and the API. Commentary had also previously been provided by Battelle and the Bethlehem Steel Corporation in advisory committee meetings.

In the notice, RSPA had invited comments on increasing the yield/tensile (Y/T) ratio for the X80 grade in the 1985 edition of API 5L, stating:

Besides the inclusion of the X80 grade, other changes in the 1985 edition are (1) an increase in the yield/tensile ratio from .90 for X70 to .93 for X80, and (2) allowing supplementary fracture toughness requirements to replace the yield/tensile ratio by agreement between the purchaser and the manufacturer for any grade of pipe. Interested persons having experience and background qualifications in this area are invited to comment on the safety impact of these changes if any is perceived. RSPA is particularly interested in receiving comments

on the .93 yield/tensile ratio for X80 steel line pipe because it represents a reduction, although small, of the margin between the maximum operating stress level (72 percent of the specified yield strength) and the ultimate tensile strength.

No commenter perceived a safety impact from the increase in the maximum Y/T ratio for the new X80 grade, although questions were raised with regard to the purpose and application of the ratio in the specification. The API states that it incorporated the Y/T ratio in the specification to limit the amount of cold expansion in the manufacture of lower strength grades of pipe, resulting in an increase in yield strength but no change in ultimate tensile strength. The API provided the following explanation:

When Y/T ratio first appeared in API 5LX in the early 1950's, the API Committee on Standardization of Tubular Goods believed that a limitation should be placed on the amount of cold expansion of pipe to enhance its yield strength. The method chosen to do this was a Y/T ratio limitation. The original Y/T ratio limitation was 0.85. When Grade X65 was first approved, a Y/T ratio of 0.90 was established for wall thicknesses greater than 0.375 inches. When Grade X70 was added, a Y/T ratio limitation was set at 0.90.

Tennessee Gas also commented on the history of the Y/T limitation, providing the following information.

The nature of steel is such that, as the strength increases, the ratio of yield strength to tensile strength becomes greater. Therefore, it was necessary for the Y/T ratio limitation to be increased for the higher strength grades. Otherwise, the pipe could not be manufactured and meet the specification.

In recent years, it has been necessary for pipe users to specify line pipe with high toughness properties. In order to provide pipe with greater toughness in an economical manner while maintaining acceptable weldability, pipe manufacturers developed specialized rolling procedures for the plate. These procedures resulted in pipe with a higher than normal Y/T ratio. Since one of the significant pipe properties affected by excessive cold expansion is fracture toughness, the Committee agreed that, for pipe that is made to a fracture toughness requirement, the Y/T ratio was unnecessary. The standards were then changed in 1981 to accommodate this problem.

It must be mentioned that none of this affected the specified minimum values for yield strength, tensile strength or ductility.

Also, the Michigan Department of Commerce stated that it supports the RSPA proposal, but expressed reservations as to whether X80 steel line pipe should be used for natural gas systems. The comment letter stated in part:

The reservations we have come from an article that appeared in the Wall Street

Journal on January 16, 1984 regarding high strength steel. (See attached copy.) We request that RSPA and/or experts in metallurgy consider the contents of this article and determine if X80 line pipe has its place in the natural gas pipeline systems.

The article referred to discusses failures, such as the Alexander L. Kielland hotel platform in the North Sea, metal-in-the-body failures, hydrogen storage tank failures and problems with high strength steel vessel walls of nuclear reactors, as well as automobile and aircraft failures. RSPA has reviewed the article (noting that the cause for the Kielland platform failure was not related to the use of high strength steel) and has consulted with expert metallurgists who are either members of the API Tubular Goods Standardization Committee or are employed by the Committee. The problems discussed in the article should not arise in the operation of gas pipelines because of the additional inspection and testing requirements for the construction of gas pipelines (including hydrostatic testing) and because of the amount of testing and evaluation that is done before approval of a new steel pipe grade and inclusion of API Specification 5L. Failures of materials discussed are those that are related to improper practices or to the usage of nonstandard alloy or heat-treated steels that are not produced in accordance with the requirements of a stringent specification and that may be used in nonregulated applications. As a result, this final rule permits the use of X80 steel line pipe subject to meeting all of the requirements of API Specification 5L, including mandatory fracture toughness requirements. Persons having a further interest should specifically address the requirements of the specification.

Use of Other Editions

Three commenters pointed out a possible problem with regard to the removal of reference to the earlier editions of API 5LS and 5LX and suggested a change to § 192.7, Incorporation by reference. Because RSPA does not intend to prohibit the use of line pipe that may have been manufactured to formerly listed editions and stock-piled for later use, the language suggested to clarify § 192.7(c) is incorporated by this final rule as an editorial change.

Advisory Committee Review

Section 4(b) of the Natural Gas Pipeline Safety Act of 1968, as amended (49 U.S.C. 1673(b)), and section 204(b) of the Hazardous Liquid Pipeline Safety Act of 1979 (40 U.S.C. 2003(b)) require that each proposed amendment to a

safety standard established under these statutes be submitted to a 15-member advisory committee for its consideration. The Technical Pipeline Safety Standards Committee, composed of persons knowledgeable about transportation of gas by pipeline, considered the proposed amendments to §§ 192.55, 192.113, Appendix A, and Appendix B of Part 192 in a meeting on December 10, 1985, in Washington, D.C. The Technical Hazardous Liquid Pipeline Safety Standards Committee considered the proposed amendments to §§ 195.3 and 195.106 in a meeting on November 18, 1985, in Washington, D.C. Both committees found the proposed amendments to be technically feasible, reasonable, and practicable. A copy of the report of each committee is available in the docket for review.

Classification

This final rule is considered to be nonmajor under Executive Order 12291 and is not a significant rule under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). The economic impact of this final rule has been found to be so minimal that further evaluation is unnecessary. The rule merely updates the incorporation by reference provisions of 49 CFR Parts 192 and 195 with regard to API specifications for line pipe.

Since the impact of this final rule is expected to be minimal, the agency certifies that it will not have a significant economic impact on a substantial number of small entities.

List of Subjects in 49 CFR Parts 192 and 195

Pipeline safety, Incorporation by reference, Line pipe.

PART 192—[AMENDED]

In view of the foregoing, RSPA amends 49 CFR Parts 192 and 195 as follows:

1. The authority citation for Part 192 continues to read as follows:

Authority: 49 U.S.C. 1672; 49 U.S.C. 1804; 49 CFR 1.53, and Appendix A of Part 1.

2. By revising § 192.7(c) to read:

§ 192.7 Incorporation by reference.

(c) The full titles for the publications incorporated by reference in this part are provided in Appendix A to this part. Numbers in parentheses indicate applicable editions. Earlier editions of documents listed or editions of documents formerly listed in previous editions of Appendix A may be used for materials and components

manufactured, designed, or installed in accordance with those earlier editions or earlier documents at the time they were listed. The user must refer to the appropriate previous edition of 49 CFR for a listing of the earlier listed editions or documents.

3. By revising § 192.55(e) to read:

§ 192.55 Steel pipe.

(e) New steel pipe that has been cold expanded must comply with the mandatory provisions of API Specification 5L.

§ 192.113 [Amended]

4. By amending § 192.113 to remove reference to API 5LX and API 5LS and related entries from the table of longitudinal joint factors.

5. By amending Appendix A to Part 192 to remove and reserve subdivisions II.A.(5) and II.A.(6) and by amending II.A.(4) by changing "(1980)" to "(1985)."

6. By amending subdivision I of Appendix B to Part 192 to remove "API 5L-Steel pipe (1980)" and "API 5LX-Steel pipe (1980)" from the listed pipe specifications, and by removing the date "(1980)" following "API 5L-Steel pipe" and inserting in its place "(1985)."

7. By revising the introductory text of subdivision II.D. of Appendix B to Part 192 to read:

Appendix B—Qualification of Pipe

II. . . .

D. Tensile Properties. If the tensile properties of the pipe are not known, the minimum yield strength may be taken as 24,000 p.s.i. or less, or the tensile properties may be established by performing tensile tests as set forth in API Specification 5L. All test specimens shall be selected at random and the following number of tests must be performed:

PART 195—[AMENDED]

8. The authority citation of Part 195 continues to read as follows:

Authority: 49 U.S.C. 2002; 49 CFR 1.53, and Appendix A to Part 1.

9. By amending § 195.3 to remove paragraphs (c)(1)(iv) and (c)(1)(v) and by amending paragraph (c)(1)(iii) by changing "(1980)" to "(1985)."

10. By revising the introductory text of § 195.106(b) to read:

§ 195.106 Internal Design Pressure.

(b) The yield strength to be used in determining internal design pressure under paragraph (a) of this section is the

specified minimum yield strength. If the specified minimum yield strength is not known, the yield strength is determined by performing all of the tensile tests of API Specification 5L on randomly selected test specimens with the following number of tests:

11. By amending § 195.106(e) to remove reference to API 5LX and API 5LS and related entries from the table of seam joint factors.

Issued in Washington, D.C., on April 17, 1986.

M. Cynthia Douglass,

Administrator, Research and Special Programs Administration.

[FR Doc. 86-9018 Filed 4-22-86; 8:45 am]

BILLING CODE 4910-60-M

National Highway Traffic Safety Administration

49 CFR Part 533

[Docket No. FE-86-01, Notice 2]

Light Truck Average Fuel Economy Standards; Model Year 1988

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

ACTION: Final rule.

SUMMARY: This notice establishes new light truck average fuel economy standards for model year 1988. The standards are required to be established at the maximum feasible level under section 502(b) of the Motor Vehicle Information and Cost Savings Act. Based on its analysis, the agency is establishing a combined average fuel economy standard of 20.5 mpg for model year 1988 light trucks. Optional separate standards of 21.0 mpg for two-wheel drive light trucks and 19.5 mpg for four-wheel drive light trucks are also established.

DATES: The amendments made by this rule to the Code of Federal Regulations are effective May 23, 1986. The standards are applicable to the 1988 model year. Petitions for reconsideration must be submitted within 30 days of publication.

ADDRESS: Petitions for reconsideration should be submitted to: Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Shelton, Office of Market Incentives, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590 (202-755-9384).

SUPPLEMENTARY INFORMATION:

Background

On January 24, 1986, NHTSA published in the Federal Register (51 FR 3221) a notice of proposed rulemaking (NPRM) on the establishment of light truck average fuel economy standards for model years 1988 and 1989. The issuance of the standards for those years is required by section 502(b) of the Motor Vehicle Information and Cost Savings Act, 15 U.S.C. 2002(b). That provision requires the Secretary of Transportation to set light truck standards at the "maximum feasible average fuel economy level" for each model year after model year 1978. In determining the "maximum feasible" level, the Secretary is directed to consider four factors: technological feasibility, economic practicability, the effect of other Federal motor vehicle standards on fuel economy, and the need of Nation to conserve energy. See 15 U.S.C. 2002(e).

The agency's January 1986 NPRM proposed ranges of possible standards for all types of light trucks, with the 1988 combined standard to be set within the range of 20.5 mpg to 22.0 mpg, and the 1989 combined standard to be set within the range of 20.5 mpg to 22.5 mpg. As a compliance alternative to the combined standard, the agency also proposed separate standards for two- and four-wheel drive vehicles. The agency stated that in view of factual uncertainties, the setting of standards outside the proposed ranges was possible depending on the comments that might be submitted.

NHTSA received comments on the NPRM from General Motors, Ford, Chrysler, American Motors, Volkswagen, the National Automobile Dealers Association (NADA), the Center for Auto Safety (CFAS), numerous employees of light truck manufacturers, dealers, and private individuals. The issues raised by the commenters are discussed below.

Summary of Decision

At this time, the agency has concentrated its efforts on analyzing issues relating to the 1988 standard. Based on its analysis, NHTSA is establishing a combined average fuel economy standard of 20.5 mpg for model year 1988 light trucks. Optional separate standards of 21.0 mpg for two-wheel drive (2WD) light trucks and 19.5 mpg for four-wheel drive (4WD) light trucks are also established. Both the combined and optional separate standards are being set at the same levels as the MY 1987 light truck fuel economy standards.

A decision will be reached at a later date with respect to the proposed model year 1989 standards.

Manufacturer Capabilities of MY 1988

As part of its consideration of technological feasibility and economic practicability, the agency has evaluated the manufacturers' fuel economy capabilities for MY 1988. In making this evaluation, the agency has analyzed manufacturers' current projections and underlying product plans and has considered what, if any, additional actions the manufacturers could take to improve their fuel economy.

A. Manufacturer Projections

General Motors: As discussed in the NPRM, General Motors (GM) projected in March 1985 that it could achieve a CAFE level of 22.6 mpg in MY 1988. That projection was 0.2 mpg higher than that company's 22.4 mpg projection for MY 1987. While GM's March 1986 submission indicated that program risks (the details of which are subject to a claim of confidentiality) could result in a decline in its projected MY 1987 CAFE of up to 1.3 mpg, the NPRM stated that the agency did not believe that particular risks affected GM's projection for MY 1988.

The NPRM noted that GM had emphasized the following in its March 1985 submission:

All estimates and future product plans contained in this submission are but a "snapshot in time". As we have stated on a number of occasions . . . changes in the economic outlook, in fuel availability, in fuel prices or in consumer preference significantly affect GM's CAFE. The unpredictability of the market, the unknown effect of future light duty truck emission regulations and the unproven results of future combinations of technology cause CAFE projections to be tentative . . .

In GM's February 1986 comment on the NPRM, the company lowered its CAFE projections for MY 1987 and MY 1988 to levels no higher than 20.5 mpg and 20.7 mpg, respectively.

One reason for the reduced MY 1987 projection is the realization of the program risk noted above, which accounts for 0.9 mpg of the decline. Additional reasons, together accounting for another 0.9 mpg of the decline, include the achievement of lower-than-anticipated fuel economy from certain programs, the purchase by consumers of more options than expected and certain changes to meet consumer demand for higher performance. A small portion of the reduction, 0.1 mpg, is associated with increased sales of certain larger engines and heavier trucks.

(The details of the changes are subject to a claim of confidentiality as confidential business information whose release could cause competitive harm. This is also true with respect to this notice's discussion of GM's MY 1988 projection and to the projections of other manufacturers.)

These changes, other than the program risks, also affect GM's MY 1988 projection, together accounting for a 1.0 mpg decline in that projection. The company also identified a number of other reasons for the reduced projection. The company no longer plans to make certain product changes which it once planned for that model year. Reasons for not making the changes relate to such concerns as durability, cost, results of market research, and the unavailability of certain equipment it planned to use. GM also now expects to include additional standard equipment on certain vehicles. These changes together account for an additional 0.6 mpg of the decline. GM also identified an apparent error in its earlier projection, accounting for 0.2 mpg of the decline, and cited miscellaneous reasons for the remaining 0.1 mpg loss.

GM's comment on the NPRM indicated that uncertainties such as the future price of fuel, small truck sales by foreign competitors and potential less-than-anticipated gains through the use of technology could result in its MY 1988 CAFE level being below its current projection of 20.7 mpg.

GM presented three possible scenarios to illustrate how factors such as these could influence its MY 1988 CAFE. The first scenario assumes constant rather than rising fuel prices and an economic outlook which reflects the former price pattern instead of the latter. According to GM, there would be a reduced incentive under this scenario for customers to buy smaller vehicles with more fuel efficient powertrains, and the company would experience a model and powertrain mix change estimated to cause a 0.3 mpg to 0.4 mpg decline in its MY 1988 CAFE projection. GM's second scenario develops that company's sensitivity to an unanticipated increase in import light truck sales above its current forecasts. According to that company, this could result in a 0.2 mpg to 0.3 mpg decline in its MY 1988 CAFE projection. GM's third scenario focuses on the introduction of emission controls which will cause heavy duty engines in trucks over 8500 pounds gross vehicle weight rating (GVWR) to be equipped with catalytic converters and use unleaded gasoline just as the trucks with lower GVWR's have been. This regulatory change

creates the potential for a shift in consumer purchases from vehicles which are just over 8500 pounds GVWR and thus not subject to the fuel economy standards to vehicles which are between 7000 pounds and 8500 pounds GVWR and within the ambit of those standards. According to GM, this potential increase in the sales of the high GVWR light trucks could reduce its CAFE projection below 20.7 mpg by approximately 0.1 mpg.

Ford: As discussed in the NPRM, Ford projected in February 1985 that it could achieve a CAFE level of up to 22.5 mpg in MY 1988. This number was adjusted in the NPRM to 22.2 mpg, however, in light of later technical information provided by Ford. The primary reason for the reduction was that actual test data regarding some programs had indicated smaller fuel economy improvements than projected. The 22.2 mpg level was 1.2 mpg higher than Ford's 21.0 mpg projection for MY 1987. The NPRM noted, however, that 0.4 mpg of the increase was attributable to mix shifts toward more fuel-efficient vehicles, which the agency considered unlikely given the recent and expected continued declines in gasoline prices. Thus, if these mix shifts were deleted, the upper end projection for MY 1988 would be 21.8 mpg.

The NPRM noted that Ford had identified several risks to its MY 1988 projection. These included both technological risks, i.e., risks that technological programs might not achieve expected fuel economy gains, and mix shift risks, i.e., risks that the sales mix of Ford's light truck fleet might shift toward less fuel-efficient vehicles. Ford identified additional technological risks totaling 0.9 mpg and mix shift risks totalling 0.6 mpg, for a total risk of 1.5 mpg. However, the agency had already incorporated 0.7 mpg in technological and sales mix risks in the 21.8 mpg figure, reducing the remaining risk to 0.8 mpg. Thus, if the events creating these risks occurred simultaneously, the lower end figure for MY 1988 would have been 21.0 mpg as of the time of the NPRM.

In Ford's February 1986 comment on the NPRM, the company lowered its CAFE projections for both MY 1987 and MY 1988. For MY 1987, Ford projected a CAFE level of 20.2 mpg to 20.4 mpg. For MY 1988, it projected a CAFE level of 20.2 mpg to 20.8 mpg. In explaining its lower projections, Ford stated that " . . . recent development testing of new hardware and technology has yielded lower levels of fuel economy benefit than had been predicted earlier in the program."

In the final rule for MY 1987, published in the *Federal Register* (50 FR 40398) on October 3, 1985, the agency noted that Ford's then latest projection for that year was for a CAFE level of no higher than 21.0 mpg. Even that figure was subject to possible adverse mix shifts of 0.4 mpg and technological risks totalling 0.3 mpg. The decline in Ford's upper end projection from 21.0 mpg to 20.4 mpg is attributable to technological reasons, almost entirely related to certain programs not achieving expected fuel economy. Of particular significance is a drop in projected fuel economy for the electronic fuel injection program for Ford's 4.9 liter I-6 engine. A very small portion of the decline, less than 0.1 mpg, is related to small increases in weight and performance. Technological risk explains the difference in Ford's low and high end current CAFE projections for MY 1987.

The drop in Ford's MY 1988 CAFE from the 21.8 mpg value used in the NPRM to the company's current maximum projection of 20.8 mpg is also attributable to technological reasons. The most significant factor in the decline is the drop in projected fuel economy for the 4.9 liter fuel injection program, which carries over from MY 1987. In addition, Ford no longer plans to make a certain technological change due to durability concerns. A number of small factors, primarily engine calibration issues, explain the remaining decline. Some of the engine calibration changes are being made to ensure compliance with emissions standards.

Ford's 20.8 mpg projection is subject to both further technological risks and mix shift risks. The company identified technological risks of 0.3 mpg, which are related to certain programs possibly not achieving projected fuel economy levels. Ford also presented a mix risk scenario in which sales were higher for standard trucks and lower for compact trucks, resulting in a potential 0.3 mpg CAFE loss. Ford's 20.2 mpg to 20.8 mpg range is explained by these risks. The company also indicated that its CAFE could decline an additional 0.2 mpg as a further mix shift risk if gasoline prices remain below \$1.00 per gallon on a sustained basis.

Chrysler: As discussed by the NPRM, Chrysler projected in August 1985 that it could achieve a CAFE level of 22.3 mpg in MY 1988. This projection was 1.1 mpg higher than that company's then latest MY 1987 projection. The NPRM stated that the bulk of the improvement would be attributable to technological improvements, especially transmission improvements. The NPRM noted that

Chrysler also expected slight mix shifts toward smaller, more fuel-efficient trucks.

In March 1986, Chrysler provided new projections of 20.4 mpg to 21.3 mpg for MY 1987 and 21.5 mpg to 22.3 mpg for MY 1988. The company stated the following:

There is considerable uncertainty associated with predicting any specific single level of annual CAFE for the 1987-89 time frame because we are in the process of revising our long range plan. For this reason, our new estimate for model years 1987-89 are presented as ranges to indicate the effects of various marketing alternatives available to Chrysler. The high ends of our ranges represent Chrysler's fuel economy capabilities, given our current product plan. These numbers are similar to those previously submitted to [NHTSA], although 1987 estimates are now much firmer due to actual test data being available. The low ends of the ranges represent the results of a new analysis in which it was assumed we would sell our products in a completely free market with no attempt on our part to force the sales mix to a desired fuel economy target.

Both product plans contain the same fuel economy improving technologies and our new Dakota N-Body truck previously described to you. Projected CAFE differences are solely a result of mix shifts. . . . Should international economic conditions continue to change, even the low end of these estimates may ultimately require market forcing and/or product limiting actions by Chrysler.

The 22.3 mpg estimate at the high end of Chrysler's projection for MY 1988 is thus the same mix of vehicles and technology as discussed in the NPRM. The 21.5 mpg estimate at the low end of that company's range for MY 1988 is based on mix shifts toward larger, less fuel-efficient trucks.

American Motors: In February 1985, American Motors (AMC) projected 4WD CAFE levels of 18.5 mpg to 22.2 mpg for MY 1987 and 19.0 mpg to 22.7 mpg for MY 1988. The company projected 2WD CAFE levels of 21.5 mpg to 24.3 mpg for MY 1987 and 21.5 mpg to 24.2 mpg for MY 1988. These projections, for which no supporting data were provided, were the latest available to the agency at the time the NPRM was issued. Since AMC had projected in its mid-model year report for MY 1985 that its CAFE levels for that model year would be 20.3 mpg for its 4WD fleet and 23.5 mpg for its 2WD fleet, the agency placed greater credence in the upper ends of the company's CAFE projections for MY 1987-88. The NPRM noted, however, that AMC had recently advised NHTSA that it was revising its projections.

In AMC's February 1986 comment on the NPRM, the company projected that its 4WD CAFE levels would be 19.2 mpg for MY 1987 and 19.3 mpg for MY 1988.

AMC projected that its 2WD CAFE levels would be 21.3 mpg for both MY 1987 and MY 1988. With 4WD vehicles accounting for most of AMC's light truck fleet, these figures result in composite CAFE levels of 19.7 mpg for MY 1987 and 19.9 mpg for MY 1988.

AMC provided the following explanation for the decline in its CAFE projections:

. . . As has been widely reported in the press, our Jeep products have experienced record sales, which have substantially changed our model mix projections. Lower-than-anticipated fuel economy performance for some future models, coupled with some administrative changes to reduce product complexity are also expected to measurably alter the fleet average values. In addition, our 2- and 4-wheel drive pickup trucks, which had not yet been introduced last February, are now on the market, giving us some actual sales information for developing future model mix projections.

NHTSA's analysis of the data provided by AMC indicated that most of the reason for the decline in that company's CAFE projections was a drop-off in average fuel economy for each truckline and not sales mix changes between trucklines. For 2WD vehicles, the fuel economy declines within each truckline caused all of the drop in the projections for both MY 1987 and MY 1988. For 4WD vehicles, the drop in the MY 1987 projection was attributable to both a shift in sales mix and lower fuel economy levels for individual trucklines. The drop in the MY 1988 projection, however, was attributable entirely to lower fuel economy levels for individual trucklines.

AMC's comment on the NPRM stated that uncertainties related to lower gasoline prices and market trends toward greater performance could significantly lower its CAFE beyond its projections. AMC stated that there is a level of uncertainty with respect to engine mix in Jeep XJ vehicles and a possibility that sales of larger model "senior Jeeps" such as the Grand Wagoneer and J-series pick-up trucks will escalate. That company also stated that sales of its smaller Comanche pick-ups could decline as buyers "move up" to larger trucks.

Volkswagen: Volkswagen (VW) currently offers only one light truck model, the Vanagon compact bus. In February 1985, VW projected a CAFE level of 21 mpg through MY 1990. In VW's March 1986 comment on the NPRM, the company provided a MY 1988 CAFE projection of 19.1 mpg. VW stated that, in response to consumer demand, it has had to make performance improvements in the

Vanagon vehicles. The company also stated that it has introduced a new 4WD version of the Vanagon, to increase the utility of the vehicle to the consumer.

Other manufacturers: Foreign manufacturers other than VW compete only in the small vehicle portion of the light truck market and are therefore expected to achieve CAFE levels well above GM, Ford, and Chrysler, which offer full ranges of light truck models.

NHTSA is aware of one other domestic manufacturer, Lands Motor Company, whose light truck fuel economy capability is expected to be below that of GM, Ford, Chrysler and AMC. While that company did not submit comments on the NPRM, it has submitted a petition requesting that the agency establish a separate class of light truck for its Precedent model and provide a separate fuel economy standard for that class. (This issue and a similar one raised by Volkswagen are addressed below in the section entitled Setting the MY 1988 Standards.) Lands Motor Company has a production goal of 500 vehicles for MY 1988, with a CAFE level of 16.9 mpg.

B. Possible Additional Actions To Improve MY 1988 CAFE

The possible additional actions which manufacturers may be able to take to improve their MY 1988 CAFE above the levels which are currently projected may be divided into three categories: further technological changes to their product plans (beyond what they are already planning), increased marketing efforts, and product restrictions.

1. Further Technological Changes

Ford commented that it is unaware of any new technology which could be executed within available leadtime to improve its CAFE significantly. Chrysler commented that "(i)t is important to recognize that the leadtime required to implement improvements in engines, transmissions, aerodynamics and rolling resistance, is usually three to four years." That company argued that "as of today, it is too late in the engineering cycle to design, develop, and implement any further major technological CAFE improvements on 1988-89 model year light trucks."

In light of limited leadtime, the agency agrees that it is too late at this time to initiate further major technological improvements. Once a new design is established and tested as feasible for production, the leadtime necessary to design, tool, and test components such as new body sheet-metal subsystems for mass production is typically 22 to 29 months. Other potential major changes, such as those cited by Chrysler, often

take longer. Leadtimes for new vehicles are typically at least three years.

However, there may be sufficient leadtime for manufacturers to make more minor technological changes, such as changes in axle ratios, refinement of engine calibrations, and changes in horsepower. In analyzing specific manufacturer capabilities below, the agency has considered whether manufacturers can make these types of changes.

2. Increased Marketing Efforts

As discussed in the NPRM, the agency believes that the ability to improve light truck CAFE by marketing efforts is relatively small. Light trucks are generally purchased for their work-performing capabilities. This is particularly true for the larger, less fuel-efficient light trucks. Since the small light trucks cannot meet the needs of many users, the manufacturers' abilities to use marketing efforts to encourage consumers to purchase smaller light trucks instead of larger light trucks are limited.

As a practical matter, marketing efforts to improve CAFE are largely limited to techniques which either make fuel-efficient vehicles less expensive or less fuel-efficient vehicles more expensive. Moreover, the ability of a manufacturer to increase sales of fuel-efficient light trucks depends in part on increasing its market share at the expense of competitors or pulling ahead its own sales from the future. The ability of domestic manufacturers to make such sales increases is also affected by the strong competition in that market from Japanese manufacturers. While Japanese manufacturers currently have an overall combined market share of about 20 percent of light trucks, their share for the smaller, more fuel-efficient pick-up trucks is about 50 percent.

The agency also notes that the improved fuel efficiency of all sizes of modern light trucks makes it more difficult to sell the small light trucks on the basis of significant operating cost savings. The reason for this is that there are diminishing returns in terms of fuel economy from purchasing smaller light trucks as the fuel efficiency of larger light trucks increases. The average fuel economy of large pickup trucks rose from 13.1 mpg in 1975 to 18.4 mpg in 1985, and the average fuel economy of large vans rose from 13.1 mpg to 17.5 mpg during this time period. The average fuel economy of small pickup trucks rose from 22.1 mpg to 26.2 mpg, and the average fuel economy of small vans rose from 20.7 mpg to 23.9 mpg. (SAE Paper No. 850550, "Light Duty Automotive Fuel Economy . . . Trends

Thru 1985.") The fuel economy of large pickup trucks and vans has thus improved more than the fuel economy of small pickup trucks and vans, both in absolute and percentage terms.

Also, as gasoline prices have declined, there are diminishing returns from purchasing more fuel-efficient vehicles. For example, an improvement in fuel efficiency from 20 mpg to 25 mpg at a gasoline price of \$1.50 per gallon would save a truck owner about \$150.00 per year, assuming 10,000 miles driven annually. However, at a gasoline price of \$1.00 per gallon, which more closely reflects today's market, the annual savings drop to about \$100.00. The financial savings for smaller changes in fuel economy will, of course, be even lower. Hence, an economically rational consumer will not be as concerned with improving fuel efficiency as gasoline prices decline, making it more difficult for a manufacturer to market its most fuel-efficient vehicles.

A problem with pulling ahead sales is that the manufacturers' CAFE levels for subsequent years are reduced. For example, if a manufacturer increases its MY 1988 CAFE by pulling ahead sales of fuel-efficient light trucks from MY 1989, its MY 1989 CAFE will decrease, compared with the level it would have been in the absence of any pull-ahead sales attributable to marketing efforts. For this reason, a manufacturer cannot continually increase its CAFE simply by pulling ahead sales.

GM commented that "(i)t would be difficult, if not impossible, to predict any gains in CAFE through marketing incentives based on present and future projections of consumer purchasing preferences, particularly in view of the uncertain future of world oil prices." Ford commented that "because of the number of competitive entries in the compact segment, potential countering actions by each competitor, and the price/cost advantage of imported models, . . . marketing actions cannot be relied upon to produce the desired effect."

Chrysler commented that "(t)ruck buyers are much more sensitive to functional needs in making their purchase decisions and in many cases they must consider their product selection as a longer term decision than a passenger car customer." That company stated that "(f)uel efficiency must often be downgraded in priority for many truck buyers because vehicle function is often paramount to the purchaser's livelihood." The National Automobile Dealers Association commented that because light trucks are most often purchased for capability and

practicability reasons, a decision to buy a larger, more powerful vehicle cannot be changed by marketing incentives. That organization emphasized that there are no available alternatives at any price for a consumer that needs a heavier light truck.

Given all of these factors, the agency does not believe that the domestic manufacturers can significantly improve their CAFE levels by increasing marketing efforts.

3. Product Restrictions

As discussed in the NPRM, manufacturers could improve their CAFE by restricting their product offering, e.g., limiting or deleting particular larger light truck models or larger displacement engines. However, such product restrictions could have significant adverse economic impacts on the industry and the economy as a whole. In the final rule reducing the light truck fuel economy standard for MY 1985, the agency concluded that sales reductions to a manufacturer of 100,000 to 180,000 units, with resulting employment losses of 12,000 to 23,000, "go beyond the realm of 'economic practicability' as contemplated in the Act. . . ." 49 FR 41252, October 22, 1984. These impacts were believed by the agency to be a reasonable projection of the impacts to Ford of restricting the availability of larger trucks and engines in order to achieve a 1.5 mpg average fuel economy benefit.

In addition to the adverse impacts on the automotive industry, a wide range of businesses could be seriously affected to the extent they could not obtain the light trucks they need for business use. Also such product restrictions could run counter to the congressional intent that the CAFE program not unduly limit consumer choice. See H.R. Rep. No. 93-340, 94th Cong., 1st Sess. 87 (1975).

GM commented that CAFE standards that are set at too stringent a level could require full-line manufacturers to consider product restrictions as a last resort. GM stated that this would occur only after incentives had been applied and other reasonable steps taken, including the application of carryforward credits. That company stated that product restrictions would be harmful to the vehicle manufacturer, its employees and suppliers, to the consumer and the nation's economy. Ford commented that establishing truck fuel economy standards above manufacturers' capability could result in substantial sales decline, adverse employment effects, and a threat of substantial economic hardship. That company stated that should the MY 1988 standard be set above its capability, it

may be forced to restrict the availability of certain V-8 engines in full-size light trucks, vans, Club Wagons and large utilities, and possibly delete some of its full-size products entirely. The company stated that market research data show that the vehicles that would most likely be restricted are used for a combination of commercial as well as personnel uses.

Given all of these considerations, NHTSA concludes that significant product restrictions should not be considered as part of manufacturers' capabilities to improve CAFE.

C. Manufacturer-Specific CAFE Capabilities

In analyzing manufacturer-specific CAFE capabilities, the agency has focused on GM, the largest domestic manufacturer and one of the two "least capable manufacturers" with a substantial share of 4WD sales; Ford, the "least capable manufacturer" with a substantial share of both combined light truck sales and 2WD sales; and AMC, the other "least capable manufacturer" with a substantial share of 4WD sales.

General Motors: As discussed above, while GM projected in March 1985 that it could achieve a CAFE level of 22.6 mpg for MY 1988, it now projects a CAFE level no higher than 20.7 mpg. The agency's analysis indicated that some of the reasons for the decline in GM's projected MY 1988 CAFE level were within that company's control. The company made a number of changes in its product plan which, in the agency's judgment, were not consistent with its long-range maximum fuel economy capability. Other reasons for the decline in GM's projected MY 1988 CAFE level were outside the company's control, including changing sales mixes of vehicles and engines due to consumer demand and achieving lower-than-anticipated gains from the introduction of new technologies.

Some of the product plan changes that were within GM's control cannot be reversed within available leadtime. However, the agency's analysis has concluded that GM can still incorporate certain other of the product actions it identified in its March 1985 submission. The agency believes that GM has time to reverse its plans for increasing horsepower and that doing so would not have a significant effect on sales. While GM claimed that this action was necessary to compete in the marketplace, its supporting documentation did not provide a sufficient rationale for the agency to change its conclusion that reversing this action would not result in competitive or other economic harm. Achieving lower horsepower levels would have the effect

of increasing GM's CAFE by an additional 0.2 mpg. In addition, GM indicated in its NPRM comments that two other planned actions (the details of which are subject to a claim of confidentiality) will reduce its CAFE by 0.2 mpg. However, the agency believes that those actions can be undertaken without adversely affecting CAFE.

NHTSA thus concludes that GM's MY 1988 CAFE could be as high as 21.1 mpg. However, the agency agrees with GM's comment that it faces a mix shift risk of 0.2 mpg to 0.3 mpg due to continued declines in gasoline prices and concomitant shifts toward larger trucks and engines for MY 1988. NHTSA is not including a risk associated with increased import light trucks in GM's capability. While manufacturers face a continuing challenge to meet possible increased light truck competition from abroad, the agency does not believe this issue, in the particular case of MY 1988 light truck sales, is likely to adversely affect domestic CAFE values. Moreover, the agency does not believe that mix shift risks and potential risks related to increased imports are additive, since lower fuel prices should enhance the domestic manufacturers' competitive positions. NHTSA believes that the issue should instead be recognized as a limitation on manufacturers' abilities to increase their market share of compact trucks beyond their present projections. NHTSA concludes that GM's MY 1988 fuel economy capability is 20.8 mpg to 21.1 mpg.

The agency has also evaluated GM's fuel economy capability for its 4WD fleet for MY 1988. The actions discussed above to raise GM's combined CAFE above its projection would also raise its 4WD CAFE. Taking these additional actions into account, NHTSA has concluded that GM's MY 1988 4WD capability could be as high as 19.5 mpg.

The agency has concluded that there is insufficient time for GM to introduce additional programs or technologies beyond those discussed above to improve its MY 1988 fuel economy level.

Ford: As discussed above, while at the time of the NPRM the agency believed that Ford might be able to achieve a MY 1988 CAFE level of as high as 21.8 mpg, the company now projects a CAFE level of 20.2 mpg to 20.8 mpg. The agency's analysis indicates that virtually all of the decline in Ford's CAFE was due to reasons beyond that company's control. The bulk of the decline in Ford's projected MY 1988 CAFE level is attributable to lower-than-anticipated fuel economy levels for the 4.9 liter fuel injection program. Given the aggressive fuel economy goals of the program when

it was approved, the agency does not consider it surprising that the goal has not been, and is not likely to be, fully attained. More stringent EPA emissions requirements also added to the difficulty of meeting the original fuel economy goal. The only significant change in Ford's MY 1988 product plan that reduced its projected CAFE was the deletion of a certain confidential technological change due to durability concerns. The agency concurs with Ford's concern about this particular issue.

The agency does not consider it likely that Ford can achieve the 20.8 mpg upper end of its range of MY 1988 CAFE values. The sales mix included in Ford's 20.8 mpg projection for MY 1988 is comparable to the mix Ford now expects for MY 1986. The agency believes that Ford's actual MY 1988 sales mix could experience some further shift toward larger trucks and engines, should gasoline prices continue to decline. Thus, the agency agrees with Ford's assessment that it faces mix shift risks of 0.3 to 0.5 mpg. As discussed above, Ford, also faces technological risks of 0.3 mpg. Taking all of these risks into account, Ford's maximum achievable CAFE could be as low as 20.0 mpg. The agency believes it likely that some but not all of these risks will occur and concludes that Ford's MY 1988 capability does not exceed 20.5 mpg.

The agency has also evaluated Ford's 2WD and 4WD fuel economy capabilities. Since the company's projected 2WD CAFE is higher than those projected by Chrysler, GM and AMC, the agency did not focus on Ford in establishing the separate 2WD standard. Ford's 4WD projection is slightly lower than those of those projected by Chrysler, GM and AMC. With the consideration of the risks to Ford's projected 2WD CAFE, the agency concluded that company's 2WD CAFE does not exceed 21.0 mpg.

As with GM, NHTSA concludes that there is insufficient leadtime for Ford to introduce additional new programs or technologies to increase its MY 1988 CAFE.

AMC: AMC projects that its 4WD CAFE will decline from 20.0 mpg for MY 1986 to 19.3 mpg for MY 1988. In analyzing AMC's fuel economy capability, NHTSA looked closely at the changes that are projected to lower that company's CAFE. The agency has concluded that certain changes related to that company's efforts to reduce product complexity, in an effort to improve its profitability, could be reversed within available leadtime, thereby raising AMC's 4WD CAFE by

0.2 mpg. The agency has also concluded that AMC could take certain development and refinement actions that would raise its 4WD CAFE by 0.1 mpg to 0.2 mpg. The agency therefore concludes that AMC's MY 1988 4WD CAFE could be as high as 19.7 mpg.

NHTSA believes that AMC faces some mix shift risks, as well as risks that it may not be able to achieve all of the additional gains identified by the agency's analysis. Because the agency believes that some but not all of these risks will occur, it concludes that 19.5 mpg is that company's maximum 4WD fuel economy capability. The agency concludes that there is insufficient leadtime for AMC to introduce additional new programs or technologies to increase its MY 1988 CAFE.

Other Federal Standards

A. Safety Standards

As discussed by the NPRM, several recent and proposed changes in Federal safety requirements may affect CAFE. These include several amendments to NHTSA's lighting standard, which permit reductions in aerodynamic drag and slight weight savings; an amendment to the agency's occupant crash protection standard to promote the comfort and convenience of safety belts, and a proposal to extend the applicability of the agency's standard concerning steering control rearward displacement to additional light trucks.

The NPRM stated that while the agency has estimated that passenger car fuel economy could be increased by 0.4 to 0.9 percent by using aerodynamic headlamps, it is likely that the potential fuel economy improvement for light trucks by adoption of this feature is less. The reason for this is that the basic shape of light trucks is often dictated by load carrying capability or other functional attributes, thereby making it more difficult to reduce aerodynamic drag. Ford commented that it agrees with the agency's conclusion in the PRIA that the potential for CAFE improvement from vehicle aerodynamics is minimal due to the higher frontal area and drag coefficients inherent in light trucks compared with passenger cars. GM commented that aerodynamics headlamps will not have an impact on light truck CAFE in the 1988-89 timeframe. That company also noted that truck designs which included improved aerodynamics through the use of lower profile headlamps and more rounded sheet metal were not well received by the public in recent design clinics.

The NPRM cited the PRIA's conclusion that the effect of the comfort

and convenience requirements on light truck CAFE will be negligible, since both the number of affected vehicles and weight impact are small. GM and Ford agreed that these requirements will not significantly affect CAFE.

With respect to the proposal to extend the applicability of the agency's standard on steering control rearward displacement, the NPRM cited the PRIA's similar conclusion that CAFE would not be significantly affected since the number of affected vehicles is believed to be small and the required modifications minimal. GM disagreed with this conclusion, stating that the standard would primarily affect the older model lines in its fleet and that significant mass increases may result from required vehicle changes. That company stated that the magnitude of the mass increases associated with the vehicle changes has not been determined, but may be relatively large and could negatively affect CAFE. Ford commented that the Econoline is its only vehicle anticipated to have significant potential for weight increase due to this proposal. It stated that since baseline testing has not been completed, specific corrective actions have not been identified and the weight effect of these changes remains an open issue. NHTSA currently anticipates that any final rule concerning this proposal would have an effective date of September 1, 1988, or later and therefore should not impact manufacturers' MY 1988 CAFE levels, significantly, if at all. The agency will address these comments to the extent necessary in establishing the MY 1989 light truck fuel economy standards.

B. Environmental Standards

The NPRM cited several final and proposed changes in environmental standards which may affect CAFE.

The Environmental Protection Agency (EPA) published a proposal on July 1, 1985 (50 FR 27188) to provide test adjustment credits to light truck manufacturers for changes made in test procedures. Assuming that EPA's final rule is along the lines of the proposal, the rulemaking is not likely to have any significant effect on the manufacturers' projections discussed above.

The EPA requirement for control of diesel particulate matter becomes more stringent in MY 1987. NHTSA's NPRM noted that in the preamble to the final rule establishing MY 1987 light truck fuel economy standards, the agency concluded that any impact of the diesel particulate requirement on fuel economy would be very small, i.e., much less than 0.1 mpg. GM commented that the standard will have a negative impact on

its CAFE but that the impact will be small since diesel sales have declined. According to that company, the maximum impact on its MY 1988 CAFE is estimated to be 0.05 mpg. AMC commented that more stringent standards are reducing diesel engines, not solely because of technological difficulties, but because with the low sales volume it would be impossible to recover the engineering costs associated with development of control systems. That company argued that the impact on CAFE of a more stringent emissions standards is the total removal of a fuel-efficient engine from the market, not just an incremental loss in fuel economy due to meeting more stringent standards. After analyzing the comments, the agency continues to believe that there will be little CAFE effect from the more stringent particulate standard since manufacturers do not plan on offering significant volumes of diesel engines that would require changes. The agency agrees with AMC that when volumes for an engine family drop below certain levels, it may become economically unattractive to spend the money necessary to certify compliance with the emissions standards. However, this is a business decision and not a direct result of the more stringent requirements to control emissions.

The EPA requirement for control of oxides of nitrogen (NO_x) becomes more stringent in MY 1988. As noted in NHTSA's NPRM, EPA estimates that with the use of three-way catalyst technology, there will be no net loss in fuel efficiency and possibly even small gains. Moreover, since the EPA regulation provides for averaging compliance with the more stringent particulate standard and the oxides of nitrogen standard, manufacturers have greater flexibility to help ensure that there are little or no attendant fuel economy penalties.

GM commented that the recalibration required to meet the 1988 NO_x standard decreases its light truck CAFE 0.3 mpg to 0.35 mpg from the level attainable if the standard were not changed. The company stated that this reduction assumes across-the-board use of closed loop throttle body injection and three way catalysts for gasoline vehicles, and has been factored into its CAFE projections. Ford stated that it does not believe that EPA's overall assessment that there will be no net loss in fuel efficiency associated with the NO_x standards is applicable to its vehicles. Ford argued that paired fuel economy data from its MY 1985 Federal and California vehicles show a fuel economy penalty of 1.3 percent to 5.3 percent (0.4

to 1.2 mpg) between the versions having the same control technologies.

(California vehicles were required to meet a MY 1985 NO_x standard that was more stringent than either the current or MY 1988 Federal standard.) According to that company, these data are consistent with its conclusion presented earlier to the agency that a light truck fuel economy penalty of 0.5 mpg may be encountered from the new Federal standard. Ford stated that a reassessment of its 1988 capabilities indicates a fuel economy penalty of about 0.2 mpg for its fleet, and that it still anticipates some degree of risk that the penalty is understated. That company also stated that it does not see any benefit in using the NO_x averaging concept adopted by EPA in light of the restrictions imposed by the conditional certificates of conformity and the engine family emission limits provisions. Ford stated that it had included a fuel economy penalty of 0.2 mpg in its MY 1988 projection.

NHTSA believes that GM's and Ford's arguments about a fuel economy penalty associated with the more stringent NO_x standards are consistent with EPA's position presented in the NPRM. That position is that with the use of three-way catalyst technology, the new NO_x standard will not cause any net loss in fuel efficiency, compared to the fuel efficiency levels under the current NO_x standard. There might even be small gains as a result of the new standard. The losses to which GM and Ford refer are actually "gains foregone" in the context of EPA's analysis, i.e., the loss is the difference in fuel economy capability of a closed loop three-way catalyst system calibrated to meet the current and new NO_x standards. Thus, by adopting three-way catalyst technology, the manufacturers avoid any losses in fuel economy associated with the new NO_x standards but do not achieve the gains that would be associated with such technology in the absence of the new standards.

AMC commented that other emission-related considerations are the increase in the useful life interval, limited maintenance intervals, and warranty liability. That company argued that because of these restrictions, manufacturers must reduce compliance/warranty risks by utilizing current technology with proven durability in the field. AMC stated that this has a direct effect on decisions to adopt newer fuel-efficient technology, especially for the lower volume manufacturers, until after the technology has proven its durability in the field for 11 years/120,000 miles. AMC did not provide any data

concerning how these types of considerations affect its CAFE. As a general matter, NHTSA believes it would be inappropriate to assume that manufacturers need to wait 11 years before deciding to adopt new technology for purposes of emissions and/or fuel economy.

NHTSA is not aware of any plans on the part of EPA to promulgate noise regulations applicable to MY 1988 light trucks and therefore does not anticipate any attendant fuel economy penalties.

GM and Ford cited several other standards which could potentially affect CAFE after MY 1988. The agency will address those comments to the extent necessary in establishing the MY 1989 light truck fuel economy standards.

Need to Conserve Energy

Since 1975, when the Energy Policy and Conservation Act was passed, this nation's energy situation has changed significantly. For example, oil markets have been deregulated and the Strategic Petroleum Reserve has been established.

In 1977, the United States imported 46.4 percent of its oil needs and the value of imported crude oil and refined petroleum products was \$67 billion (stated in 1984 dollars). While the import share of total petroleum demand declined after that year, the cost continued to rise to a 1980 peak level of \$93.2 billion (1984 dollars). By 1985, the import share had declined to 28.7 percent at a cost of \$48.3 billion.

Moreover, imports from OPEC sources have declined, from a high of 6.2 million barrels per day and 70.3 percent of all imports in 1977 to 1.8 billion barrels per day and 36.2 percent of imports in 1985. As imports have shifted to non-OPEC sources, such as Mexico, Canada and the United Kingdom and as this country builds up its strategic stockpile, the United States' petroleum market has become less vulnerable to the political instabilities of some OPEC countries, as compared to the situation in the mid-1970's.

Overall, the nation is much more energy independent than it was a decade ago, when Congress established that fuel economy standards program. From 1975 to 1984, energy efficiency in the economy improved by 21 percent (1984 Annual Energy Review, Energy Information Administration (EIA), U.S. Department of Energy, p. 47). Domestic oil production is higher than it was in 1975, total imports have dropped 18 percent since then, the value of the nation's imported oil bill has declined 35 percent in the last five years, and the amount of imported oil from OPEC has dropped by 71 percent since the peak of

1977. As a percentage share of GNP, the net oil import bill fell from 2.8 percent in 1980 to 1.2 percent in 1985. Future trends, as history has demonstrated, are subject to great uncertainty. However, the price of oil is now fully decontrolled, permitting consumers to make choices in response to market signals and allowing the market to adjust quickly to changing conditions. The Strategic Petroleum Reserve now contains approximately 500 million barrels that can be used to ameliorate the effect of supply interruptions. Thus, by any measure, the nation is in a stronger, and more efficient, energy position than it was a decade ago.

GM's comment on the NPRM stated that the effect of "the deregulation of the oil industry and the existence of the Strategic Petroleum Reserve as well as continued conservation and the development of alternative energy sources, such as methanol, has been to place the U.S. in a much more secure energy position. That commenter urged that it is "important that NHTSA take these developments into account in explaining the 'need of the nation to conserve energy.'"

Chrysler commented that it believes that the need to conserve petroleum-based energy should remain a national priority, despite the transient period of falling fuel prices we are now experiencing. That company stated that there is every reason to expect that oil will again be in short supply, even within the lifetime of vehicles produced in the 1988-89 models years.

The Center for Auto Safety commented that the nation is facing a future of greater reliance on imported petroleum to fuel a vehicle fleet which includes an increasing share of light trucks. That organization argued that the Iraq-Iran war and other Middle East instabilities continue to threaten our national security, and cited a study by the National Academy of Sciences noting that the oil in the Strategic Petroleum Reserve will equal a decreasing number of days supply in future years.

Since the NPRM was prepared, world oil prices have dropped precipitously, from \$28 to \$30 a barrel late last year to close to \$10 a barrel this year in some cases. While the fall in oil prices offers significant benefits to consumers and other users of oil, it may also result in decreased domestic production and increased reliance on foreign imports. The most recent available long term projection by EIA and Data Resources, Inc. (DRI), which are based on late 1985 data, indicate that domestic production could decline from a stable level of 10.6 MMB/D to about 8.2 MMB/D by 1995,

and net imports could rise from 4.2 MMB/D to about 7.7 (EIA) to 9.1 (DRI) MMB/D by 1995. If this occurred, imports could reach 50 percent of U.S. petroleum use by 1995. As noted by the NPRM, however, experience has shown that future projections about petroleum supply, prices and imports are subject to great uncertainty.

MY 1988 light trucks meeting the 20.5 mpg standard established by this rule will be more fuel-efficient than the average vehicle in the current light truck fleet in service, thus making a positive contribution to petroleum conservation. Further, the agency believes that many of the changed conditions since 1975, including decontrol of oil, establishment of the Strategic Petroleum Reserve, and diversification of the sources of oil imports, ensure that the nation will remain in a strong energy position, even if imports should rise to earlier levels.

Determining the Maximum Feasible Average Fuel Economy Level

As discussed above, section 502(b) requires that light truck fuel economy standards be set at the maximum feasible average fuel economy level. In making this determination, the agency must consider the four factors of section 502(e): technological feasibility, economic practicability, the effect of other Federal motor vehicle standards on fuel economy, and the need of the nation to conserve energy.

A. Interpretation of "Feasible"

Based on dictionary definitions and judicial interpretations of similar language in other statutes, the agency has in the past interpreted "feasible" to refer to whether something is capable of being done. The agency has thus concluded in the past that a standard set at the maximum feasible average fuel economy level must: (1) Be capable of being done and (2) be at the highest level that is capable of being done, taking account of what manufacturers are able to do in light of available technology, economic practicability, how other Federal motor vehicle standards affect average fuel economy, and the need of the nation to conserve energy. In this rulemaking, as earlier rulemakings, NHTSA has considered and weighed all four statutory factors of section 502(e) and has not merely adopted a level based on what was technologically capable of being done.

B. Industrywide Considerations

The statute does not expressly state whether the concept of feasibility is to be determined on a manufacturer-by-manufacturer basis or on an industrywide basis. Legislative history

may be used as an indication of congressional intent in resolving ambiguities in statutory language. The agency believes that the below-quoted language provides guidance on the meaning of "maximum feasible average fuel economy level."

The Conference Report to the 1975 Act (S. Rep. No. 94-516, 94th Cong., 1st Sess. 154-5 (1975)), states:

Such determination [of maximum feasible average fuel economy level] should therefore take industrywide considerations into account. For example, a determination of maximum feasible average fuel economy should not be keyed to the single manufacturer which might have the most difficulty achieving a given level of average fuel economy. Rather, the Secretary must weigh the benefits to the nation of a higher average fuel economy standard against the difficulties of individual manufacturers. Such difficulties, however, should be given appropriate weight in setting the standard in light of the small number of domestic manufacturers that currently exist, and the possible implications for the national economy and for reduced competition association (sic) with a severe strain on any manufacturer. . . .

It is clear from the Conference Report that Congress did not intend that standards simply be set at the level of the least capable manufacturer. Rather, NHTSA must take industrywide considerations into account in determining the maximum feasible average fuel economy level. The focus, thus, must be on the manufacturers' collective ability to meet a standard, rather than any particular manufacturer's ability to meet it.

NHTSA has consistently taken the position that it has a responsibility to set light truck standards at a level that can be achieved by manufacturers whose vehicles constitute a substantial share of the market. See 49 FR 41251, October 22, 1984. The agency did set the MY 1982 light truck fuel economy standards at a level which it recognized might be above the maximum feasible fuel economy capability of Chrysler, based on the conclusion that the energy benefits associated with the higher standard would outweigh the harm to Chrysler (45 FR 20871, 20876; March 31, 1980). However, as the agency noted in deciding not to set the MY 1983-1985 light truck standards above Ford's level of capability, Chrysler had only 10-15 percent of the light truck domestic sales, while Ford had about 35 percent. (45 FR 81593, 81599; December 11, 1980).

C. Setting the MY 1988 Standards

Based on the analysis described above and on manufacturer projections, the agency concludes that

manufacturers can achieve the combined fuel economy levels in the following table:

Manufacturer	Approximate market share	Combined CAFE
Chrysler	13.0	21.5 mpg to 22.3 mpg.
GM	33.0	20.8 mpg to 21.1 mpg.
Ford	25.0	20.5 mpg.
AMC	5.0	19.9 mpg ¹
Volkswagen	0.5	19.1 mpg.
Lands	(²)	16.9 mpg.

¹ AMC's MY 1988 combined projection, unadjusted for the additional 4WD fuel-economy improving actions identified by NHTSA's analysis.

² Less than 0.01 percent.

As indicated above, foreign manufacturers other than Volkswagen only compete in the small vehicle portion of the light truck market and are therefore expected to achieve CAFE levels well above GM, Ford and Chrysler, which offer full ranges of light truck models.

NHTSA has concluded that among the manufacturers with a substantial share of combined light truck sales, Ford is the least capable manufacturer, with a maximum MY 1988 combined fuel economy capability no higher than 20.5 mpg. While AMC has a lower combined capability than Ford, due to AMC's model mix being heavy weighted toward 4WD vehicles, AMC does not have a substantial share of combined light truck sales. Further, the agency has again adopted the approach of setting optional separate 2WD and 4WD standards in light of model mixes that are heavily weighted toward 4WD vehicles. Since, as discussed below, AMC can meet both the 2WD and 4WD standards, it is unnecessary for it to be able to meet the combined standard.

NHTSA has concluded that 20.5 mpg is the maximum feasible combined standard for the 1988 model year. This level balances the potential petroleum savings associated with higher standards against the difficulties of individual manufacturers facing potentially higher standards.

The setting of maximum feasible fuel economy standards, based on consideration of the four required factors, is not a mere mathematical exercise but requires agency judgment. In setting the MY 1988 standards, the agency believes that the current plummeting of gasoline prices affects both the benefits of differing levels of average fuel economy standards and the difficulties of individual automobile manufacturers facing higher standards, i.e., both of the considerations NHTSA must balance in setting maximum feasible standards taking industrywide considerations into account. (See the

language of the Conference Report quoted above.)

The main benefit from setting higher fuel economy standards is the potential additional petroleum savings which would result. Since rapidly falling gasoline prices result in reduced consumer demand for higher fuel economy, individual manufacturers whose maximum fuel economy capabilities may be above the level of the industrywide standard may have less incentive to achieve their maximum capabilities. This may explain GM's business decision to cancel some technological programs to improve fuel economy and Chrysler's current reconsideration of its product mix for future model years. There may, of course, be counterbalancing motivations for achieving higher fuel economy, such as a need or desire to earn credits for exceeding fuel economy standards.

The 20.5 mpg standard will be challenging for Ford, without causing significant economic distortion, and act as an incentive for that company to achieve its maximum fuel economy capability. Since Ford produces more than 25 percent of all light trucks subject to fuel economy standards, a standard set at its level can make a substantial contribution to petroleum conservation.

NHTSA believes there are serious questions whether a standard set at a level above Ford's capability would be consistent with the requirement that standards be set taking industrywide considerations into account, given that company's more than 25 percent market share. Even if the MY 1988 standard could be set at a level above Ford's capability, however, the agency believes that it clearly could not be set above both Ford's and GM's capabilities, since those companies' combined market share approaches 60 percent. As noted previously, the agency's estimate of GM's maximum capability for MY 1988 is 20.8 to 21.1 mpg. Thus, any higher standard than 20.5 mpg could not exceed that range.

The precise effects on petroleum conservation of a standard set at GM's projected capability are uncertain, although the effects can be bounded. The maximum theoretical additional energy savings associated with a standard set at that higher level can be determined by comparing hypothetical situations where GM and Ford would have combined average fuel economy levels of 21.0 mpg versus 20.5 mpg. Since most other manufacturers in the industry project MY 1988 CAFE above that of GM's capability, a standard set at 21.0 mpg would not be expected to affect the petroleum consumption of trucks manufactured by that part of the

industry. The difference in total gasoline consumption between these two hypothetical situations, over the lifetime of the MY 1988 fleet, would be 419 million gallons. The maximum yearly impact on U.S. gasoline consumption would be 48.3 million gallons, or roughly five hundredths of one percent of total motor vehicle gasoline consumption.

The agency believes, however, that any actual gasoline savings associated with a higher standard would be much less. While GM would have an added incentive to achieve its maximum fuel economy capability, it is not clear in light of possible carryforward/carryback credits whether this would actually occur. Ford could not likely improve its CAFE other than by restricting sales of its larger light trucks and engines. To the extent that would-be purchasers of such vehicles and engines transferred their purchases to GM and Chrysler without those companies otherwise changing their product plans, there could be little or no effect on petroleum consumption.

While the agency recognizes that a higher standard could have some effect on gasoline consumption, it concludes that the effect would be much less than the theoretical maximum noted above and could be negligible.

A higher standard than 20.5 mpg could result in serious economic difficulties for Ford. NHTSA believes that the first potential fuel-efficiency enhancing actions that Ford or any other manufacturer would consider in response to a higher standard would primarily consist of marketing actions. For the reasons discussed earlier in this notice, however, the agency does not believe that marketing actions can be relied upon to significantly improve fuel economy. Assuming that such marketing actions were unsuccessful in whole or in part, Ford would likely have to engage in product restrictions, including limiting the sales of larger engines and/or vehicles to improve its fuel economy. Such product restrictions could result in adverse economic consequences for Ford, its employees, and the economy as a whole and unduly limit consumer choice, especially with regard to the load carrying needs of light truck purchasers.

The agency believes that the current situation of plummeting gasoline prices can create significant difficulties for individual manufacturers facing higher CAFE standards. As gasoline prices fall, consumer demand shifts toward larger vehicles and more power engines. While the magnitude of such shifts is limited to some extent by the fact that trucks are purchased largely with respect to work-

performing capabilities, lower gasoline prices can nonetheless result in mix shifts which lower manufacturers' CAFE. The large magnitude of the recent drop in gasoline prices makes it particularly difficult for manufacturers such as Ford to attempt to use marketing efforts to overcome such shifts in consumer demand.

Given Ford's more than 25 percent share of the light truck market, its capability has a significant effect on the level of the industry's capability and, therefore, on the level of the standards. The agency believes that for Ford, the 20.5 mpg standard balances the potentially serious adverse economic consequences associated with market and technological risks against that company's opportunities as the least capable manufacturer with a substantial share of sales. The agency concludes, in view of the statutory requirement to consider several factors, that the relatively small and uncertain energy savings associated with setting a standard above Ford's capability would not justify the economic harm to that company and the economy as a whole.

The agency recognizes that a 20.5 mpg standard is above the capabilities of Volkswagen and Lands Motor Company. Given the limited remaining leadtime for both companies and the limited financial resources of Lands, the agency does not believe that either company could change its product plans to meet the 20.5 mpg standard. In the absence of some type of alternative light truck standard which these companies could meet (an issue which is addressed further below), the companies would therefore be limited to two options: paying the statutory penalties associated with failure to comply with fuel economy standards (to the extent credits are not available) or drastic product actions which, in the case of Lands, could include ceasing production. While the agency appreciates these difficulties, it also concludes that establishment of a standard less than 20.5 mpg would reduce or eliminate the incentives for Ford to achieve its maximum capability and essentially render meaningless any impact the light truck CAFE program has on petroleum conservation. Given that Volkswagen and Lands Motor Company together represent less than one-half of one percent of the light truck market and in light of the above factors, NHTSA believes that it would be inappropriate to set industrywide standards based on these manufacturers' capabilities. In light of the statutory criteria, NHTSA concludes that the petroleum savings associated with the 20.5 mpg standard

outweigh the difficulties to these two companies.

A combined standard of 20.5 mpg was supported by some manufacturers. Ford's comment on the NPRM recommended a MY 1988 standard of 20.5 mpg. Ford noted that although the level of its recommended standard is higher than the low end of its estimated capability when all potential risks are taken into account, it believes that the 20.5 mpg level represents a reasonable balancing of the risks and opportunities facing the company and, therefore, reflects its best estimate of Ford's maximum feasible average fuel economy capability. Chrysler stated that given the present circumstances and uncertainties, it would not object if the agency sees fit to carry over the present 1987 light truck CAFE standard of 20.5 mpg to MY 1988.

GM commented that due to such uncertainties as potential further mix shifts and increased imports, beyond what it is currently projecting, a 20.5 mpg standard might be too stringent. That company stated that if its current forecasts prove to be unduly optimistic, it would then have to either petition for a lower standard or resort to product restrictions with attendant layoffs and negative impact on the economy in order to remain in compliance.

NHTSA disagrees with this comment of GM. As discussed above, the agency has concluded that GM can take additional technological actions beyond what it is now planning to achieve a MY 1988 CAFE of 20.8 mpg to 21.1 mpg. If that company now believes that there is a significant question concerning whether its current product plan can meet the 20.5 mpg standard, it can take the additional technological actions to ensure compliance. Moreover, as GM stated elsewhere in its comment and as noted above, product restrictions would occur only after incentives and available credits had been applied.

The Center for Auto Safety (CFAS) urged that the MY 1988 standard be set at 23.5 mpg. That commenter's request appears to have been based on the manufacturers' projections cited in the NPRM, on its assertion that the manufacturers' projections are "considerably below true manufacturing potential," and on its contention that changing market conditions will help light truck fuel economy rather than cause it to deteriorate, as the percentage sales of compact and more fuel-efficient light trucks is expected to increase. CFAS also argued that GM and Ford have had at least five years leadtime to introduce new models and technologies for the 1988 standard.

NHTSA disagrees with CFAS's arguments supporting a 23.5 mpg standard. The agency's analysis of changes in the manufacturers' projections is fully discussed above. CFAS did not support its allegation concerning manufacturers' projections being below true manufacturing potential, other than to reference a comment it has made in the agency's ongoing passenger automobile fuel economy rulemaking. The agency has analyzed the data underlying the manufacturers' light truck CAFE projections and has no reason to give this allegation any credence. While it is true that the percentage sales of compact light trucks is expected to increase, the agency agrees with a comment by Ford that this shift is unlikely to cause any significant increase in its CAFE because estimated sales of its products are heavily weighted toward the larger vehicles. As stated by that company, significantly increasing its share of the compact truck market beyond projections would be difficult, since the Japanese manufacturers have emphasized that market. Ford also pointed out that competitive reports indicate that competition is expected to intensify in that market as the Japanese work to strengthen their market share at the expense of the domestic manufacturers. NHTSA also disagrees with CFAS's argument that GM and Ford have had at least five years leadtime for the 1988 standard. Unlike the situation with passenger automobile fuel economy standards, where a 27.5 mpg standard is in place indefinitely unless it is amended by the agency, no light truck fuel economy standard is in place until it is established by the agency.

As in past years, the agency has decided to continue setting 2WD and 4WD standards as an alternative to the combined standard. Separate 2WD/4WD standards allow manufacturers greater flexibility in planning to meet CAFE standards and do not discriminate against firms with truck fleets heavily weighted toward 4WD models.

NHTSA has concluded that AMC and GM are the least capable manufacturers with substantial shares of 4WD light trucks, and has focused on these manufacturers' capabilities in establishing the separate 4WD standard. As discussed earlier in the notice, the agency concluded that 19.5 mpg is AMC's maximum 4WD fuel economy capability and that GM's 4WD fuel economy capability could be as high as 19.5 mpg. The final 4WD standard is being established at 19.5 mpg.

AMC has traditionally been the manufacturer primarily concerned about separate standards due to the high percentage of 4WD light trucks in its fleet. AMC requested in its comment that the 4WD standard be set at 19.0 mpg. NHTSA has concluded, however, that AMC can achieve a MY 1988 4WD CAFE of 19.5 mpg by making relatively minor changes in its product plan and thereby meet the 19.5 standard. While the agency recognizes that the 19.5 mpg standard will be challenging for AMC, it believes that it is appropriate under the statutory requirement for "maximum feasible" standards.

The agency notes that Chrysler has a lower 4WD fuel economy capability than GM, AMC, or Ford. Chrysler projects that its 4WD CAFE could be as low as 17.4 mpg. However, in 1985, Chrysler's share of the 4WD market was less than five percent. Thus, that company did not have a substantial share of 4WD light truck sales. Moreover, since Chrysler can meet the combined standard, it is unnecessary for it to be able to meet the separate standards.

NHTSA has concluded that Ford is the least capable manufacturer with a substantial share of 2WD light trucks, and has focused on that manufacturer's capabilities in establishing the separate 2WD standard. As discussed earlier in the notice, the agency concluded that Ford's maximum 2WD fuel economy capability is 21.0 mpg. The final 2WD standard is being set at 21.0 mpg.

AMC requested in its comment that the 2WD standard be set at 20.3 mpg. The company projects its MY 1988 2WD CAFE at 21.3 mpg. NHTSA has concluded, based on its analysis of that company's projection, underlying product plan, and expected market conditions, that AMC can meet the 2WD separate standard of 21.0 mpg.

Volkswagen suggested as an alternative to establishing a combined standard within its capability that the agency consider alternate special consideration for limited product line truck manufacturers. In establishing the MY 1980-81 light truck CAFE standards, the agency did establish a separate standard in light of International Harvester's (IH) limited product line. See 43 FR 11995, March 23, 1978. The agency noted that IH had unique problems given its limited sales volume, restricted product line, the fact that its engines were derivatives of medium duty truck (above 10,000 pounds GVWR) engines, and the fact it did not have experience with state-of-the-art emission control technology which the

other manufacturers had obtained in the passenger automobile market. The agency emphasized, however, that the separate class was being established for only two model years' duration, concluding that IH should be able to achieve levels of fuel efficiency in line with other manufacturers within that time period either through purchasing engines from outside sources or by making improvements to current engines. The agency does not believe that Volkswagen's situation is similar to that of IH. While IH's difficulties were related to being newly subject to the fuel economy program, Volkswagen's CAFE difficulties are not. Moreover, establishing a separate standard for Volkswagen would be outside the scope of notice of the NPRM.

The agency will address Lands Motor Company's petition requesting a separate fuel economy standard for its Precedent model in a separate notice.

Impact Analyses

1. Executive Order 12291

The agency considered the economic implications of the fuel economy standards established by this rule and determined that the rule is major within the meaning of Executive Order 12291 and significant within the meaning of the Department's regulatory procedures. The agency believes that many of the changed conditions since 1975, including decontrol of oil, establishment of the Strategic Petroleum Reserve, and diversification of the sources of oil imports, ensure that the nation will remain in a strong energy position, even if imports should rise to earlier levels. The agency believes also that the standards established by this notice can be met without significant economic distortion. The agency's detailed analysis of the economic effects is set forth in its regulatory impact analysis. The contents of that analysis are generally described in the above sections of this preamble.

2. Environmental Impacts

The agency has analyzed the potential environmental impacts of these light truck fuel economy standards in accordance with the requirements of the National Environmental Policy Act of 1969 and concluded that the rule it is adopting will not significantly affect the human environment. An Environmental Assessment (EA) was prepared and placed in the public docket in conjunction with the NPRM and made available to the public for comment. The EA analyzed the potential

environmental effects for the range of standards proposed by the NPRM. The EA stated that the agency expected to make a finding that the rulemaking would not have a significant impact on the human environment. No comments were received on the EA.

As indicated in the EA, any fuel savings that might have resulted from the establishment of standards at the high end of the proposed range would have been minimal. With respect to any possible effects on air pollution, the agency notes that a recent letter to NHTSA from the Environmental Protection Agency (EPA), in another fuel economy rulemaking, discussed a number of considerations concerning why little change in air quality can be expected from different levels of fuel economy standards. (Docket No. FE-85-01, Notice 2, Item 121.) Among other things, the letter indicated that exhaust emissions will not change because EPA mobile source standards for oxides of nitrogen (NO_x), carbon monoxide (CO), and hydrocarbons (HC) are expressed in grams/mile. While the EPA mobile source standard for lead (Pb) is expressed in grams per gallons of gasoline, compliance with that standard would not be affected by a change in fuel consumption because MY 1988 light trucks must use unleaded fuel. NHTSA concludes that little change in air quality is expected as a result of the adoption of these regulations.

Based on all available information, including the analysis presented in the EA, the agency has determined that this rulemaking action will not have a significant effect upon the environment. The agency is therefore making a finding of no significant impact (FONSI).

3. Impacts on Small Entities

Pursuant to the Regulatory Flexibility Act, the agency has considered the impact this rulemaking action will have on small entities. I certify that this action will not have a significant economic impact on a substantial number of small entities. Therefore, a regulatory flexibility analysis is not required for this action. Only one light truck manufacturer, Lands Motor Company, might be classed as a "small business" under the Regulatory Flexibility Act. In the case of small businesses, organizations and governmental units which purchase light trucks, those entities which purchase a 1988 truck might achieve a gain in fuel economy as compared to a situation in which there was no standard. The cost impact of this rulemaking action is not

high enough to reduce the ability of these groups to purchase new vehicles.

Department of Energy Review

In accordance with section 502(j) of the Act, the agency has submitted this rule to the Department of Energy for review. The Department made no unaccommodated comments.

List of Subjects in 49 CFR Part 533

Energy conservation, Gasoline, Imports, Motor vehicles.

PART 533—[AMENDED]

In consideration of the foregoing, 49 CFR Part 533 is amended as follows:

1. The authority citation for Part 533 continues to read as follows:

Authority: 49 U.S.C. 1657; 15 U.S.C. 2002; delegation of authority at 49 CFR 1.50.

2. Table II in § 533.5(a) is revised to read as follows:

§ 533.5 Requirements.

(a) * * *

TABLE II

Model year	Combined standard		2-wheel drive light trucks		4-wheel drive light trucks	
	Captive imports	Others	Captive imports	Others	Captive imports	Others
1982.....	17.5	17.5	18.0	18.0	16.0	16.0
1983.....	19.0	19.0	19.5	19.5	17.5	17.5
1984.....	20.0	20.0	20.3	20.3	18.5	18.5
1985.....	19.5	19.5	19.7	19.7	18.9	18.9
1986.....	20.0	20.0	20.5	20.5	19.5	19.5
1987.....	20.5	20.5	21.0	21.0	19.5	19.5
1988.....	20.5	20.5	21.0	21.0	19.5	19.5

* * * * *

3. Section 533.5(d) is revised to read as follows:

* * * * *

(d) For model years 1982-88, each manufacturer may:

(1) Combine its 2- and 4-wheel drive light trucks (segregating captive import and other light trucks) and comply with the combined average fuel economy standard specified in paragraph (a) of this section; or

(2) Comply separately with the 2-wheel drive standards and the 4-wheel drive standards (segregating captive import and other light trucks) specified in paragraph (a) of this section.

Issued on April 17, 1986.

Diane K. Steed,

Administrator.

[FR Doc. 86-9032 Filed 4-18-86; 12:00 pm]

BILLING CODE 4910-59-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 671

[Docket No. 50950-5182]

Tanner Crab off Alaska

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of season closure.

SUMMARY: The Director, Alaska Region, NMFS (Regional Director), has determined that the *Chionoecetes opilio* Tanner crab fishery in the Southeastern Subdistrict of the Bering Sea District of Registration Area J (Westward) must be closed in order to protect all Tanner crab stocks. The Secretary of Commerce therefore issues this notice closing fishing for all Tanner crabs by vessels of the United States in the Southeastern subdistrict. This action is intended as a management measure to conserve Tanner crab stocks.

DATES: This notice is effective at noon, Alaska Standard Time (AST), April 21, 1986. Public comments on this notice of closure are invited until May 6, 1986.

ADDRESSES: Comments should be sent to Robert W. McVey, Director, Alaska Region, National Marine Fisheries Service, P.O. Box 1668, Juneau, AK 99802. During the 15-day comment period, the data on which this notice is based will be available for public inspection during business hours (8:00 a.m. to 4:30 p.m., AST, weekdays) at the NMFS Alaska Regional Office, Federal Building, Room 453, 709 West Ninth Street, Juneau, Alaska.

FOR FURTHER INFORMATION CONTACT: Raymond E. Baglin (Fishery Management Biologist, NMFS) 907-586-7230.

SUPPLEMENTARY INFORMATION: The Fishery Management Plan for the Commercial Tanner Crab Fishery off the Coast of Alaska (FMP), which governs this fishery in the fishery conservation zone under the Magnuson Fishery Conservation and Management Act (Magnuson Act), provides for in season adjustments of area openings and closures. Implementing regulations at § 671.27(b) specify that notices of these adjustments will be issued by the Secretary of Commerce under criteria set out in that section.

Section 671.26(f) establishes six district within Registration Area J to independently manage individual Tanner crab stocks. One of these districts is the Bering Sea District, which is further divided into three subdistricts.

The regularly scheduled 1986 fishing season for *C. opilio* in the Southeastern Subdistrict began on January 15, 1986 (50 FR 47549, November 19, 1985). A large portion of this subdistrict, south of 58° N. latitude and east of 164° W., longitude, was closed by emergency rule (51 FR 12857, April 16, 1986) to all fishing for Tanner and king crabs because of the depressed condition of *C. bairdi* Tanner crab and red king crab stocks.

Reasons for this closure follows:

As of April 7, approximately 45 vessels have delivered about 7.4 million pounds of *C. opilio* Tanner crab from the Southeastern Subdistrict. The catch per unit of effort (CPUE) fluctuated from 152 to 247 *C. opilio* Tanner crabs per pot during January. Beginning in February, effort remained constant enough to document trends in CPUE. The CPUE declined from 189 crabs per pot during the week ending February 9 to 66 crabs per pot during the week ending April 6. Currently, fishing vessels are transferring into the Pribilof Subdistrict because catches in the Southeastern Subdistrict are low. The drastic decline in CPUE indicates a rapid unanticipated depletion of the available *C. opilio* Tanner crab stock.

Based on the rapidly declining CPUE in the fishery, the Regional Director has determined that the condition of the *C. opilio* Tanner crab stocks in the Southeastern Subdistrict is substantially different from the condition anticipated on November 1, the beginning of the fishing year, and that this difference reasonably supports the need to protect the *C. opilio* Tanner crab stocks. The Southeastern Subdistrict, as defined in § 671.26(f)(1)(vi)(A), is closed by this notice until noon, Alaska Daylight Time, August 1, 1986, at which time the closure of this subdistrict prescribed in Table 1 of § 671.21(a) will begin.

This closure will become effective after this notice is filed for public inspection with the Office of the Federal Register and the closure is publicized for 48 hours through procedures of the Alaska Department of Fish and Game. Public comments on this notice of closure may be submitted to the Regional Director at the address above. If comments are received, the necessity of this closure will be reconsidered and a subsequent notice will be published in the **Federal Register**, either confirming this notice's continued effect, modifying it, or rescinding it.

Other Matters

Tanner crab stocks in the Southeastern Subdistrict of Registration Area J (Westward) will be subject to damage unless this closure takes effect

promptly. NOAA therefore finds for good cause that advance opportunity for public comment on this notice is contrary to the public interest and that no delay should occur in its effective date.

This action is taken under 50 CFR Part 671 and complies with Executive Order 12291.

List of Subjects in 50 CFR Part 671

Fisheries, Reporting and recordkeeping requirements.

Authority: 16 U.S.C. 1801 et seq.

Dated: April 18, 1986.

Carmen J. Blondin,

Deputy Assistant Administrator For Fisheries Resource Management, National Marine Fisheries Service.

[FR Doc. 86-9067 Filed 4-21-86; 8:45 am]

BILLING CODE 3510-22-M

50 CFR Part 672

[Docket No. 51180-5180]

Fishery Conservation and Management Groundfish of the Gulf of Alaska

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of closure.

SUMMARY: The Director, Alaska Region NMFS (Regional Director), has determined that the share of the sablefish optimum yield (OY) allocated to hook-and-line gear in the Southeast Outside District and in the East Yakutat District of the Eastern Regulatory Area of the Gulf of Alaska will be achieved on April 17, 1986. A closure of the fishery for sablefish by hook-and-line gear is necessary to limit the harvest of sablefish by hook-and-line gear to the 95 percent of the OY that is permissible by Federal law in these districts. This closure is a management measure intended to allocate the sablefish resource between hook-and-line and trawl gear in the Southeast Outside and East Yakutat districts as required by Amendment 14 to the Fishery Management Plan for the Groundfish Fishery of the Gulf of Alaska (FMP).

DATES: This notice is effective at noon, Alaska Standard Time (AST), April 17, 1986, until midnight, AST, December 31, 1986. Public comments are invited on this closure until May 2, 1986.

ADDRESS: Comments should be sent to Robert W. McVey, Director, Alaska Region, National Marine Fisheries Service, P.O. Box 1668, Juneau, Alaska 99802. During the 15-day comment period, the data upon which this notice is based will be available for public

inspection during business hours (8:00 a.m. to 4:30 p.m., Monday through Friday) at the Alaska Regional Office, NMFS, Federal Building, Room 453, 709 West Ninth Street, Juneau, Alaska.

FOR FURTHER INFORMATION CONTACT:

Ronald J. Berg (Fishery Management Biologist, NMFS), 907-586-7230.

SUPPLEMENTARY INFORMATION: The FMP, which governs the groundfish fishery in the fishery conservation zone under the Magnuson Fishery Conservation and Management Act (Magnuson Act) provides for inseason adjustments of fishing seasons and areas. Regulations at § 672.22(a) specify that these adjustments will be made by the Secretary of Commerce under procedures set out in that section.

Section 672.2 defines three regulatory areas in the Gulf of Alaska. One of these is the Eastern Regulatory Area, which is further divided into three regulatory districts for the purpose of better managing sablefish: West Yakutat, East Yakutat, and Southeast Outside. Current regulations at § 672.20, Table 1, specify the OYs in the Southeast Outside and East Yakutat Districts to be 470 to 1,435 mt and 850 to 1,135 mt, respectively. However, the North Pacific Fishery Management Council (Council), at its December 10-14, 1985, meeting, determined that the OYs in these two districts should be 2,346 mt and 1,104 mt, respectively. The Council recommended that NOAA promulgate an emergency rule under Magnuson Act section 305(e), to implement these new OYs, pending amendment of the FMP. The Alaska Region has submitted this emergency rule for review by the Secretary of Commerce; it is expected to be promulgated within the next month.

Section 672.24(b)(1) of the regulations allows directed fishing, defined at § 672.2, for sablefish in the Eastern Area with hook-and-line gear only to 95 percent of its OY. Fishing for other groundfish species with trawl gear is allowed until trawl vessels have harvested 5 percent of the sablefish OY as a bycatch. Thus, 95 percent and 5 percent of the new sablefish OYs are allocated to vessels using hook-and-line gear and trawl vessels, respectively.

In determining the 1986 sablefish shares between hook-and-line and trawl gear in the Southeast Outside and East Yakutat Districts under the sablefish allocation formula provided by Amendment 14, the NMFS Alaska Region is using 95 percent and 5 percent of the recommended 1986 OYs, respectively. The allocations, therefore, between hook-and-line and trawl gear are 2,229 mt and 117 mt in the Southeast

Outside District; and 1,049 mt and 55 mt in the East Yakutat District.

An estimated 150 hook-and-line vessels have conducted a directed fishery for sablefish during the fishing season, which began on April 1, 1986. Except for a week of poor weather, many vessels have experienced good catches. On average, each of the vessels is harvesting an estimated 1.3 metric tons of sablefish per day. At the current catch rate, the hook-and-line shares of the OYs will be fully harvested on April 17, 1986, and further directed sablefish fishing with hook-and-line gear after noon on that date is prohibited. This closure is a management measure intended to implement the allocation of the sablefish resource as provided for by Amendment 14 to the FMP. Sablefish landings by hook-and-line vessels west of the East Yakutat District, i.e., west of 140° W. longitude, are expected to increase rapidly as part of the fleet moves west following notice of this closure.

One of the regulations implementing Amendment 14—§ 672.24(b)—requires the NMFS Regional Director to close all fishing for groundfish with a gear type in an area when the sablefish share allocated by Amendment 14 to that gear type in that area has been taken. At its January 15-17, 1986 meeting, however, the Council recommended that NOAA amend this regulation to allow the Regional Director to prohibit directed fishing for sablefish by that gear type in that area and thus leave a bycatch amount to support other directed groundfish fisheries. Fishing for other groundfish species could thus continue. If the sablefish share was nevertheless harvested before the end of that year, the Regional Director could allow fishing by that gear in that area for other groundfish species to continue, with sablefish being treated as a prohibited species, providing that overfishing of sablefish would not result. The Alaska Region has also submitted an emergency rule that would amend the regulation cited above to implement the Council's recommendation.

The requirement of § 672.20(b) that all groundfish fishing by a gear type in an area be closed when its sablefish allocation for that area has been taken conflicts with Amendment 14 as interpreted by the Council and NMFS. The Regional Director is, therefore, not obliged even before promulgation of the new rule to impose such a closure, provided that continued fishing by that gear type will not cause overfishing of sablefish. The Regional Director has reviewed the bycatches of sablefish that might be taken in other directed