aimability of headlamps and might be the basis for a world-wide lower beam pattern. The Committee would develop its recommendations through a negotiation process. The Committee would be composed of persons who represent the interests affected by the rule such as domestic and foreign manufacturers of motor vehicles, headlamps, and headlamp aimers, motor vehicle inspection facilities, consumers, and State and Federal governments. NHTSA invites interested persons to submit nominations and applications for membership on the Committee, and comments on the subject matter.

DATES: NHTSA must receive written comments and requests for representation or membership not later than July 10, 1995.

ADDRESSES: Comments should mention the docket and notice number shown above and be submitted in triplicate to Docket Clerk, room 5109, 400 Seventh Street, SW, Washington, DC 20590. Docket hours are from 9:00 a.m. to 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Jere Medlin, Office of Vehicle Safety Standards, NHTSA (202–366–5276).

SUPPLEMENTARY INFORMATION:

I. Background

(A) Petition for Rulemaking Submitted by General Motors

General Motors Corporation (GM) petitioned NHTSA for rulemaking to amend Federal Motor Vehicle Safety Standard No. 108 Lamps, Reflective Devices, and Associated Equipment to allow fractional balance optical amiability of certain replaceable bulb and integral beam headlamps. GM wants to use headlamps that can not be aimed with external mechanical aimers. or with the on-vehicle mechanical aimers now specified by the standard. Lamps that used fractional balance optical aim could be aimed only by means of a new optical aimer, which is estimated to cost about \$3,000. The cost of a current mechanical aimer capable of achieving accurate headlamp aim is about \$250.

Information submitted by GM with its petition indicates that most facilities performing motor vehicle inspections, whether owned privately or by the State, choose to check and adjust headlamp aim visually, rather than with the more objective mechanical aimers. In the most common form, aim in State inspections is judged subjectively by the eye of an inspector viewing a headlamp beam pattern cast upon a distant vertical surface, such as a wall or screen. Based on this subjective observation, the inspector decides whether the beam pattern falls in the area (s)he believes is correct. Another form of visual inspection involves the use of optical machines which condense the beam pattern onto an internal aiming screen so that the longer separation distance between lamp and target necessary for the other form of visual aiming is not necessary. The cost of these machines is moderate.

Until 1983, headlamps were required to be sealed beam in construction, of specific shapes and sizes and capable of mechanical aim. There was a standardized location for aiming pads on headlamp lenses, and only four simple adapters were required for the base mechanical aimer to fulfill its function. When Standard No. 108 was amended to permit replaceable bulb headlamps of no specific shape and size, headlamps began growing both smaller and larger for reasons of weight and drag reduction and style, requiring additional, adjustable adapters for aiming by mechanical means. To preclude designing separate adapters for mechanical aimers, and to permit even smaller headlamps not capable of using adapters, manufacturers developed onboard mechanical aiming devices, and Standard No. 108 was further amended to permit these "vehicle headlamp aiming devices" (VHADs). While this added modestly to vehicle cost, it eliminated the need to use external means to mechanically aim the headlamps. However, because of the need to reduce time and costs, the GM data indicate that inspection stations have resorted to judging aim visually, rather than through on-board or exterior mechanical aimers.

NHTSA granted GM's petition in order to engage in a review of the subject of headlamp aim and amiability.

(B) Regulatory Goals

Visual aim of headlamps conforming to Standard No. 108 has a potential negative safety effect because U.S. lower beam patterns lack clearly defined borders which, if present, would permit a more objective visual determination of aim. Visual aiming of U.S. lower beam patterns introduces an element of subjectivity into the inspection process and substantial aim error that does not exist with mechanical or on-board aimers. Beam patterns with clearly defined fiducial marks or cutoffs, such as those typical of European or Japanese market headlamps, permit a more objective and more accurate determination of whether the aim of the headlamp is correct when the headlamp is visually aimed.

For some years, NHTSA has been engaged in harmonization efforts to find and implement windows of overlapping performance between the lighting requirements of Standard No. 108 and those of Europe and Japan. With respect to headlamps, to achieve such a window where a headlamp could comply with regulations worldwide, Standard No. 108 would need to move toward a beam pattern with more clearly defined features in it for visual amiability. Such a move would recognize the current reality of headlamp aiming inspection in the United States, and ultimately enhance safety by increasing the objectivity and accuracy of determining correct headlamp aim with the naked eye.

The Society of Automotive Engineers (SAE) has addressed the issue of a modified beam pattern in SAE Standard J1735 Harmonized Vehicle Headlamp Performance Requirement. SAE members from vehicle and lighting manufacturers around the world have participated in this effort for the sole purpose of developing a lower beam pattern that could be the model for a world-wide specification, if not the specification itself. It is similar, but not identical, to the European, Japanese and U.S. lower beam patterns, combining important features of each, while trying not to compromise features deemed essential by those regulatory jurisdictions.

In summary, given the trend away from mechanical aiming by those who aim headlamps and the desire to not offer a mechanically amiable headlamp on vehicles, the optimal solution for improving headlamp aim in the United States appears to be the development of a beam pattern that provides an objective visual determination of the accuracy of that aim.

II. Regulatory Negotiation

Due to the increasing complexity and formalization of the written rulemaking process, it can be difficult for an agency to craft effective regulatory solutions to certain problems. During the rulemaking process, the participants may develop adversarial relationships that prevent effective communication and creative solutions. The exchange of ideas that can lead to solutions acceptable to all interested groups sometimes do not occur in the traditional notice and comment context. As the Administrative Conference of the United States (ACUS) noted in its Recommendation 82–4:

Experience indicates that if the parties in interest work together to negotiate the text of a proposed rule, they might be able in some circumstances to identify the major issues, gauge their importance to the respective