Gastonia Municipal Airport, be used for aeronautical purposes.

DATES: Comments must be received on or before August 16, 2001.

ADDRESSES: Comments on this notice may be mailed or delivered in triplicate to the FAA at the following address: Atlanta Airports District Office, 1701 Columbia Ave., Suite 2–260, Atlanta, GA 30337–2747.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Larry W. Wood, Assistant City Manager of the City of Gastonia at the following address: Post Office Box 1748, Gastonia, NC 28053–1748.

FOR FURTHER INFORMATION CONTACT: Tracie D. Kleine, Program Manager, Atlanta Airports District Office, 1701 Columbia Ave., Suite 2–260, Atlanta, GA 30337–2747, (404) 305–7148. The application may be reviewed in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA is reviewing a request by the City of Gastonia to release 19.9 acres of surplus property at the Gastonia Municipal Airport. The property will be purchased by Gaston Day School, Inc. The school plans to use this property to expand its athletic venues. The net proceeds from the sale of this property will be used for airport purposes. The proposed use of this property is compatible with airport operations.

Any person may inspect the request in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT**.

In addition, any person may, upon request, inspect the request, notice and other documents germane to the request in person at the Gastonia Municipal Airport.

Issued in Atlanta, Georgia on July 9, 2001.

Scott L. Seritt,

Manager, Atlanta Airports District Office, Southern Region.

[FR Doc. 01–17863 Filed 7–16–01; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–1999–6583]

Request for Comments and Notice of Public Workshop; NCAP Consumer Braking Initiative

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

ACTION: Request for comments; notice of public workshop.

SUMMARY: The National Highway Traffic Safety Administration (NHTSA) is holding a public workshop and soliciting comments on a draft test protocol to expand the New Car Assessment Program (NCAP) to provide brake performance information on new light vehicles to consumers. Since 1979, NHTSA has been providing consumers with useful information on the frontal crash performance of motor vehicles through the NCAP. The NCAP program has been expanded over the past few years to include side impact crash performance and rollover resistance ratings. Focus groups have indicated that motor vehicle brake performance is a prime area for consumer information. To date, brake testing variability has been NHTSA's primary concern in the development of an effective brake system rating. Based on new findings from vehicle research, the agency believes that testing variability can be sufficiently minimized to make a NCAP braking program viable when vehicles equipped with 4-wheel antilock braking systems are tested.

DATES: *Written comments:* Written comments may be submitted to this agency and must be received on or before October 15, 2001.

Public workshop: The public workshop will be held on September 26, 2001, from 9 a.m. to 4 p.m. Those wishing to participate should contact Mr. Jeff Woods by September 24, 2001.

ADDRESSES: *Written comments:* Comments must refer to the Docket and Notice numbers cited at the beginning of this Notice and be submitted to: Docket Management, Room PL–401, 400 Seventh Street, SW., Washington, DC 20590. The Docket Section is open on weekdays from 10 a.m. to 5 p.m. Alternatively, you may submit your comments electronically by logging onto Docket Management System web site at *http://dms.dot.gov.* Click on ''Help & Information'' or ''Help/Info'' to view instructions for filing your comments electronically. Regardless of how you submit your comments, you should mention the docket number of this document.

Public workshop: The public workshop will be held at the Nassif Building, 400 Seventh St., SW., Washington, DC 20590; room number to be provided to participants prior to the meeting.

FOR FURTHER INFORMATION CONTACT: Mr. Jeff Woods, Office of Safety Performance Standards, NPS–22, National Highway Traffic Safety Administration, 400 Seventh Street SW., Washington, DC 20590. Telephone: (202) 366–6206; Fax: (202) 366–4329.

SUPPLEMENTARY INFORMATION:

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I. Background

Since 1979, NHTSA has been providing consumers with valuable safety information on frontal crash performance of motor vehicles through the New Car Assessment Program (NCAP). NCAP is perhaps one of the most recognized motor vehicle consumer information programs in the U.S. and has been expanded to provide data on motor vehicle side impact performance. Other countries have joined in NHTSA's effort to give the public meaningful comparative information about the safety of different vehicles. At this time, Australia, Japan, and Europe have NCAP programs in place.

However, no crash avoidance performance information has ever been made available from the U.S. NCAP vehicles. As a result, NHTSA has explored the possibility of providing crash avoidance consumer information through non-destructive testing of NCAP vehicles before they are crash tested. The agency believes that providing brake performance information to consumers would give consumers important and meaningful safety information and help motivate vehicle manufacturers to continue to improve the brake performance of light vehicles. Good braking performance can be a key factor in crash avoidance.

Japan initiated its NCAP braking program in 1995 and has been providing braking performance information to its consumers since that time. The Japanese NCAP braking program provides stopping distances on dry and wet road surfaces from a vehicle speed of 100 km/h (62 mph) and indicates whether the vehicle remained in the test lane throughout the stop. This information is provided to the public together with the NCAP crash testing information.

In August 1996, NHTSA released the results of a 4000-person national survey conducted in 1995 under the National Performance Review. Among the key findings was that 75.7% of drivers ranked safety as very important in affecting their purchase of a new vehicle.

In the 1980's, NHTSA considered publishing comparative vehicle stopping distance data provided by manufacturers under the subsequently-rescinded consumer regulation on that subject. However, one of the drawbacks with those data was that many manufacturers, including Chrysler, Ford, and General Motors, were simply providing the stopping distance required for all of their models under FMVSS No. 105, rather than the actual stopping distance. This factor contributed to the agency's decision to rescind that consumer information regulation in 1985.

NHTSA's chief technical concerns with developing a brake system performance rating have focused primarily on issues of variability. The three primary sources of variability are: vehicle-to-vehicle variability, test driver variability, and test conditions (test surface, etc.). In 1997, the agency initiated a vehicle research program to evaluate how best to minimize test driver and test surface variability expected from NCAP brake testing. We did not address the issue of vehicle-to-vehicle variability since it is a function of the vehicle manufacturing process and therefore would not be minimized by the test methodology. The two reports from the vehicle research conducted in 1998 and 1999 are summarized below and can be accessed through the Docket Management System web site at *http://dms.dot.gov* in Docket Nos. NHTSA–1999–6583–1 and NHTSA–1999–6583–2.

II. Vehicle Research

The agency has conducted light vehicle brake testing in a variety of research programs, including the Light Vehicle ABS Research Program that is evaluating the effectiveness of ABS in reducing crashes. We believe that of the brake system performance measures evaluated during testing, the easiest for consumers to understand and use is probably stopping distance. Other measures of brake performance evaluated during research, such as brake efficiency, ABS efficiency and brake pedal gain, showed higher levels of variability, and are less intuitive concepts to communicate to consumers.

Based on the agency's findings from prior light vehicle brake research, we have tentatively concluded that (a) stopping distance is the best measure of brake performance for consumer use; (b) variability exists between vehicles of the same model; (c) ABS generally improves stopping distance performance; (d) and low coefficient of friction surfaces, such as wet jennite, produce the most variability and would not be useful for consumer information.

Aberdeen Test Center

The agency initiated additional testing at Aberdeen Test Center (Aberdeen) in 1998 to evaluate a simplified test protocol and the magnitude of driver and surface variability. The ten ABS-equipped vehicles selected for testing included 5 passenger cars, 2 minivans, 1 full-size van, 1 Sport Utility Vehicle (SUV) and 1 pickup truck with rear-wheel-only ABS. One of the passenger cars was used as a control vehicle, and was tested throughout the duration of the testing period. Ten straight line stops were conducted on each test surface condition, including dry and wet asphalt, from a vehicle speed of 100 km/h (62 mph), with the vehicle in the loaded and unloaded conditions. The agency used ten stops to ensure that any variability in brake performance from stop to stop could be well identified.

The results of the stopping distance tests showed that the five passenger cars were the best performers with an average stopping distance of 46.3 m (152 ft) on the dry asphalt and 51.2 m (168 ft) on the wet asphalt road surface. The three vans were mid-performers with dry road stops averaging 50.3 m (165 ft) and wet road stops averaging 52.7 m (173 ft). The average stopping distance of the SUV and the pickup truck was 56.4 m (185 ft) on the dry asphalt surface and 62.2 m (204 ft) on the wet asphalt surface, although the pickup truck had longer stops and more variability since it was equipped with rear-wheel-only ABS. The test results were also analyzed to provide a standard deviation and a 95th percentile stopping distance value for the ten stops. The 95th percentile stopping distance provides a measure of brake performance based on the average stopping distance and the variability of the data set, and represents the distance within which the vehicle would stop 95 percent of the time. Vehicles with high variability will have 95th percentile stopping distances significantly longer than the reported average.

A comparison of the standard deviation for the ten stops for each test vehicle shows the low variability that was achieved by each vehicle grouping. The standard deviation, which is a measure of the variability of the data set, indicates a low variability for the stops conducted on the passenger cars and vans, and a somewhat higher variability for the sport utility vehicle on the dry road surface. The pickup truck had a higher degree of variability as well. The standard deviation for the passenger cars tested on the dry surface in a lightly loaded condition had a range of 0.43–0.98 m (1.4–3.2 ft), and on the wet surface in a lightly loaded condition ranged from 0.55–1.88 m (1.8–6.0 ft). Similarly, for the vans tested, the standard deviation for the dry, lightly loaded condition, and for the wet, lightly loaded condition ranged from 0.40–0.95 m (1.3–3.1 ft) and 0.27–1.01 m (0.9–3.3 ft), respectively. The SUV had a standard deviation of 2.47 m (8.1 ft) on the dry test surface and 0.82 m (2.7 ft) on the wet test surface, both in the lightly loaded condition. The pickup truck, which was equipped with a rear-wheel-only ABS had a larger standard deviation mainly because of the driver modulation that was required to prevent front wheel lockup and achieve the best stop.

The brake pedal application force for the stopping distance tests was targeted at 500 Newtons (112 pounds). However, even though the peak pedal forces were up to three times higher than target forces, this did not affect the stopping distance results. Since the vehicles were all ABS-equipped, once the ABS activated the stopping distance performance seemed impervious to brake pedal force, except for the pickup truck, which required test driver brake pedal modulation to prevent front wheel lockup. An analysis of the test data showed that even though the test drivers were able to achieve pedal forces as high as 1730 N (390 lbs) in some of the test runs, such high pedal forces did not improve the stopping distance performance of the vehicle. For example, on the Pontiac Grand Am, which was used as the control vehicle, the shortest stop (42.4 m [139 ft]) was achieved with 1050 N (237 lbs) of pedal force, whereas the longest stop (45.7 m [150 ft]) was achieved with a higher pedal force of 1370 N (309 lbs). The parameter that seemed the most relevant to consistent and shorter stops was the brake application rate. The results show that consistency could be achieved using a brake application rate of greater than 445 N (100 lbs) of pedal force in 0.2 seconds or less.

The test surfaces used for this testing were dry asphalt and wet asphalt. These are typical of the road surfaces that most drivers experience and would therefore provide useful information for consumers. The peak friction coefficient (PFC) measurement for the dry asphalt test surface ranged from 0.89 to 0.95 during the testing period, and for the wet asphalt surface 0.85 to 0.88. The ambient temperatures during the testing period ranged from 7 °C to 22 °C (45 °F to 71 °F). Although these moderate temperatures did not show any correlation with the stopping distance performance of the vehicles tested, the agency believes that testing in moderate ambient temperatures in the Fall and Spring might yield more consistent results for testing conducted in northerly parts of the U.S.

The conclusions we tentatively reached from the Aberdeen research were that driver and surface variability can be minimized to make the NCAP brake performance program a viable one. Driver variability could be minimized by testing only ABS-equipped vehicles, by using straight line stops, and by specifying a minimum application rate for the brake pedal force. Surface variability could be minimized by specifying high coefficient of friction dry and wet test surfaces, and by specifying an ambient temperature or surface temperature range for testing.

Round-Robin Testing

The agency initiated a round-robin test in September 1999 to further evaluate the effects of surface variability on braking performance. The objective was to determine the impact that surface variability has on stopping distance performance by analyzing and comparing the stopping distance performance of the same vehicles tested at different facilities using the same test protocol. The agency also wanted to determine if different test drivers could obtain similar results. Four vehicles (a passenger car, a SUV, a minivan, and a pickup truck) were tested at three different test sites and again at the first test site. The PFC of the test surface was measured at each test facility during the vehicle testing.

As was the case for the earlier testing (with the exception of the pickup truck) all of the vehicles were equipped with four-wheel antilock braking systems. By using only ABS-equipped vehicles, the driver is able to make a rapid, hard brake pedal application resulting in ABS activation and control of the brake forces at the wheels to prevent wheel lockup and optimize stopping distance performance.

Four rounds of testing were conducted at three test facilities—at Aberdeen, MGA Research in Madison, Wisconsin, and the Transportation Research Center (TRC) in East Liberty, Ohio. The first and fourth rounds of testing were both conducted at Aberdeen. Pavement friction was measured at each facility using a skid trailer, and meteorological measurements including air and road surface temperatures and wind speed were monitored during the testing. Test surface slope and grade measurements were recorded.

PFC measurements taken at Aberdeen indicated that during the first round of testing, the dry PFC was 0.94 and the wet PFC was 0.93. PFC measurements during the fourth round of testing at Aberdeen were higher for the dry pavement, at 0.95 and 1.00 for pre- and post-test measurements, respectively. PFC measurements for the wet surface at Aberdeen for the fourth round were 0.91 and 0.90 for pre- and post-test measurements, respectively.

The PFC measurements from TRC for the dry surface were 0.91 and 0.94 for the pre- and post-test measurements, respectively, and for the wet surface were 0.84 and 0.83 for pre- and post-test, respectively. The difference in PFC between Aberdeen (higher PFC) and TRC (lower PFC) resulted in stopping distances of 6 to 15 feet longer at TRC than the fourth round Aberdeen stopping distances. The PFC measurements at MGA were 0.99 and 0.95 for pre- and post-test dry pavement, respectively, and 0.97 and 0.96 for pre- and post-test wet pavement, respectively. The MGA test surface had several pavement repair strips, which affected the vehicle stopping results with larger standard deviations for each series of stops on each vehicle, compared to the results at Aberdeen and TRC.

The results of this Round Robin testing indicate that specifying the test surface in terms of PFC will be of primary importance for the NCAP braking program since the PFC value does affect the stopping distance results. The results also indicate that conducting the brake testing for all NCAP vehicles at the same test facility would reduce the surface variability and result in more consistent stopping distances for all tested vehicles.

III. Agency Plan

1. ABS-Equipped Vehicles

The test vehicles used during the research program were all ABS-equipped so as to minimize the effects of driver variability due to driver skill. A vehicle's ABS senses impending wheel lockup and automatically modulates the brake to provide the shortest stop for the given road surface condition. This automatic modulation performed by the ABS maintains the braking force close to the level just short of wheel lockup. For the Phase I testing conducted at Aberdeen, the control vehicle tested using different brake application rates showed very little change in its stopping distance performance even though the brake pedal application force ranged from 472 N to 1721 N (106 lbs to 387 lbs). In essence, once the ABS activates, increasing the brake pedal force has no impact on the stopping distance performance.

The agency has no immediate plans to conduct brake testing on vehicles not equipped with 4-wheel ABS for the NCAP program. The concern associated with testing vehicles with rear-wheel-only systems or without ABS is that it would increase the influence of driver variability since a driver would be required to modulate the brakes manually to achieve the no-wheel-lock requirement. Driver brake pedal modulation introduces more variability from stop to stop and results in larger deviations between test runs. The agency notes that in recent NCAP braking tests conducted in Japan, all vehicles were equipped with ABS although the information provided does not indicate if these were all vehicles with 4-wheel ABS.

2. Transmission Selector Control

The agency's draft test protocol includes testing each vehicle with its transmission selector control in gear. Federal motor vehicle safety standards require most stopping distance tests to be conducted with the transmission selector control in neutral so that the stopping distance performance of the vehicle would not be affected by engine braking. We believe that stopping distance data with vehicles tested in gear would produce more relevant consumer information since this condition is more representative of what a driver encounters during an emergency braking situation. Even though engine braking may help to shorten vehicle stopping distance, we believe that its relevance for consumer use outweighs any small adverse impact on establishing a valid comparison of the performance of service brake systems on light vehicles.

3. Brake Application Rate

The test data indicate that the rate of brake pedal application is more important for consistent and short stopping distances, than the magnitude of the brake pedal force. An analysis of the results showed that data sets including stops where the pedal application rate was at least 222 N (50 lbs) in 0.2 seconds generally had a higher variability in stopping distance than the same data sets with the stops having an application rate of below 445 N (100 lbs) in 0.2 seconds removed. We concluded that slow pedal force rates may have delayed the activation of the ABS system and consequently, increased the stopping distance variability of the data set. These results independently correlate closely to the Japan NCAP braking test procedure which specifies that the brake pedal force shall reach 500 N (112 lbs) in 0.25 seconds. Therefore, in the interest of harmonizing to a certain extent with the Japanese program, the agency proposes that the brake pedal application force of 500 N (112 lbs) be achieved within 0.25 seconds. This brake pedal application rate is important for minimizing the variability caused by differences in the initial pedal force input and will ensure repeatable ABS activation.

In addition to the initial application rate, we believe that it is important to specify a steady state pedal force for the remainder of the stop. After the initial ramp up in the brake force to achieve the 445 N (100 lbs) in 0.25 seconds, test drivers achieved pedal forces as high as 1735 N (390 lbs) to ensure that the ABS remained activated for the duration of the stop. An analysis of the data showed that such high pedal forces are not necessary to ensure ABS activation throughout the stop, and that a steady-state pedal force of about 670 N (151 lbs) would be appropriate. We also have considered establishing an upper limit for the brake pedal force peak after the initial application rate is satisfied. However, since that upper limit value could vary based on the vehicle and test driver performance, we believe that it would be better to establish a time frame within which the steady state pedal force condition should be achieved. This would ensure a consistent time frame for achieving the steady state braking force applied by the test driver, and therefore, enhance the repeatability of the test protocol.

As mentioned above, the Japanese NCAP brake test procedure specifies an initial application rate of 500 Newtons in 0.25 seconds. In addition, their procedure specifies a steady state application force of 500 ± 30 Newtons, without specifying a time frame within which this force should be achieved. The difficulty in using this protocol is that our tests indicate that a peak pedal force in the 670 to 900 N (150 to 202 lbs) range always occurs in order to achieve the rapid brake pedal application rate. The agency believes that to achieve the rapid application rate without exceeding a 530 N (119 lbs) limit, a special brake application device may be required in lieu of using a test driver.

The agency, therefore, contemplates specifying that a steady state pedal force of 670 ± 70 N (151 ± 15.7 lbs), and that this pedal force be attained within the initial 0.75 seconds of the brake pedal application.

4. Test Surface Variability

The coefficient of friction of the test surface plays a major role in the braking performance of a vehicle. The PFC is currently used as the measure of the surface friction in the agency's light vehicle brake standard and has a nominal value of 0.90 for dry pavement. Vehicle compliance testing on dry pavement by the agency is conducted on a surface 0.90 or higher. Dry and wet asphalt surfaces were used for the NCAP brake testing because they represent the type of road surfaces on which consumers typically drive. The PFC measurements recorded during the Phase I testing at Aberdeen ranged for 0.89 to 0.95 for the dry asphalt surface, and 0.85 to 0.88 for the wet asphalt surface. For the Phase II round robin testing, the PFC recorded at the three test sites ranged from 0.91 to 1.00 for the dry surfaces and 0.83 to 0.97 for the wet test surfaces. The stopping distance results for the test vehicles in both Phase I and Phase II show no correlation between small changes in PFC and corresponding changes in vehicle stopping distance. Therefore, we believe that for the NCAP brake program, a test surface friction range should be specified to accommodate small daily variances in PFC.

Based on the agency's experience with PFC values and given the PFC values obtained during the NCAP brake testing, we contemplate that the PFC specification for the dry surface would be 0.90 to 0.95, and for the wet surface 0.80 to 0.85.

5. Surface Temperature

The agency believes that ambient and test surface temperatures have an impact on vehicle stopping distance performance. However, an analysis of the temperature effects was not possible since the temperature changes were not sufficiently large to draw any conclusions or establish any correlation between ambient and/or surface temperature and stopping distance. The vehicle testing in both Phase I and Phase II was conducted in the Fall with the ambient temperatures ranging from 2°C to 24°C (35°F to 76°F) and within the ambient temperature range specified in FMVSS No. 135 (0°C and 40°C).

We believe that conducting vehicle testing in moderate ambient temperatures, as those experienced in the northern continental U.S. during the Fall or Spring, would provide more repeatable stopping distance results, compared with testing at ambient temperature extremes during the Winter or Summer. The Japanese NCAP brake test procedure specifies a surface temperature range and makes no reference to ambient temperature. The surface temperature they specify include 25 °C − 45 °C (77 °F − 113 °F) for the dry surface and 22 °C − 32 °C (72 °F − 90 °F) for the wet surface. In the interest of developing a test procedure that is similar to the Japanese procedure, we are contemplating specifying a surface temperature range, instead of an ambient temperature range. We believe that variances in the surface temperature would have a more direct impact on the PFC and stopping distance performance of tested vehicles, and by specifying surface temperatures for NCAP brake testing the surface variability would be minimized.

6. Number of Stops

The stopping distance performance requirements specified in the agency's brake standards generally require the best of six stops for specific test conditions, which considers that the test driver needs several attempts in order to achieve his best stop. However, the agency believes that ten stops would allow for a better determination of the stopping distance value we convey to consumers. Since the NCAP braking program is for consumer information, as opposed to for vehicle compliance, and since it is necessary to convey a stopping distance value that the consumer is likely to achieve in an emergency braking situation, the agency believes that ten stops would be more appropriate than six stops for the NCAP braking test procedure. Furthermore, even though ABS-equipped vehicles reduce driver variability compared with non-ABS vehicles, there still exists some small variability in the performance of ABS that could be minimized by requiring more stops.

7. Presentation of Data

The goal of the NCAP braking program is to provide accurate, unbiased brake performance information that is useful and informative to the consumer. Two measures of stopping distance performance that could be used to inform the consumer of a vehicle's braking performance are average stopping distance and the 95th percentile stopping distance. The average stopping distance represents a mean of the vehicle's brake performance over the ten stops performed during the testing, with all stops included in the calculated average. The 95th percentile stopping distance provides a measure of brake performance based on the average stopping distance and the variability of the data set, and informs the consumer of the distance within which the vehicle should stop 95 percent of the time. For the Aberdeen testing, the 95th percentile stopping distance is equal to: (10-stop average) + (1.645 × Standard Deviation). Vehicles with high stop-to-stop variability will have 95th percentile stopping distances significantly higher than the reported average, while those with small deviations between individual stopping distances will have values closer to the reported average.

The agency believes that presenting the information in the form of the 95th percentile stopping distance would be more beneficial to consumers since this stopping distance value is based on the average stopping distance and the variability experienced in the ten stops. We believe that providing the average stopping distance value would not, by itself, indicate the variability from stop to stop; hence a comparison of two vehicles with similar averages but with different stop-to-stop variability could be misleading to the consumer in conveying the performance that he is most likely to achieve for that vehicle. Given that a consumer has one opportunity to obtain a best stop in an emergency braking situation, the 95th percentile stopping distance represents the stopping distance that he/she is likely to achieve in such a situation, provided that the brake pedal application rate and force, the road surface friction and load conditions are similar to those used during the NCAP braking test. The agency, therefore, contemplates that the 95th percentile stopping distance value would be presented as the brake performance measure for the NCAP brake program.

The test lane width is specified at 3.5 meters (11.5 ft) for the NCAP brake testing and is the same as specified in Standard No. 135. NHTSA believes that vehicle stability and stopping distance are both important for achieving good braking performance, and that we should indicate, along with the stopping distance data, whether the vehicle stayed within the lane throughout the stop. Japan currently indicates in their data whether the vehicle deviated from the test lane during the stopping distance test, and a review of results reported in their consumer information shows that none of the vehicles tested that were equipped with 4-wheel ABS deviated from the lane during the braking test.

IV. Proposed Test Protocol

The test conditions that the agency included in the draft test protocol are based on the conditions specified in FMVSS No. 135, Light vehicle brake systems, with a few modifications.

Definitions

Gross vehicle weight rating or GVWR means the value specified by the manufacturer as the loaded weight of a single vehicle.

Initial brake temperature or IBT means the average temperature of the service brakes on the hottest axle of the vehicle 0.32 km (0.2 miles) before any brake application.

Lightly loaded vehicle weight or LLVW means unloaded vehicle weight plus the weight of a mass of 180 kg (396 pounds), including driver and instrumentation. The unloaded vehicle weight includes all fluid reservoirs filled to maximum capacity, but without cargo and accessories that are ordinarily removed from the vehicle when they are not in use.

Peak friction coefficient or PFC means the ratio of the maximum value of braking test wheel longitudinal force to the simultaneous vertical force occurring prior to wheel lockup, as the braking torque is progressively increased.

Stopping distance means the distance traveled by a vehicle from the point of application of force to the brake control to the point at which the vehicle reaches a full stop.

General Conditions

Pavement friction dry. The road test surface produces a peak friction coefficient (PFC) of 0.90–0.95 when measured using an American Society for Testing and Materials (ASTM) E1136 standard reference test tire, in accordance with ASTM Method E1337–90, at a speed of 64.4 km/h (40 mph), without water delivery.

Pavement friction wet. The road test surface produces a peak friction coefficient (PFC) of 0.80–0.85 when measured using an American Society for Testing and Materials (ASTM) E1136 standard reference test tire, in accordance with ASTM Method E1337–90, at a speed of 64.4 km/h (40 mph), with water delivery.

Pavement temperature dry. The test temperature for the dry pavement is 35 °C ± 10 °C (95 °F ± 18 °F).

Pavement temperature wet. The test temperature for the wet pavement is 27 °C ± 5 °C (81 °F ± 9 °F).

Wet pavement condition. For wet surface testing, the test area shall be fully wet with standing water not deeper than 3 mm (1/8 inch). Water shall be applied to the test surface prior to each brake stop.

Gradient. The test surface has no more than a 0.5% gradient in the direction of testing and no more than 1.5% gradient perpendicular to the direction of testing.

Lane width. Tests are conducted on a test lane 3.5 m (11.5 ft) wide.

Vehicle Conditions

Vehicle weight. The vehicle shall be tested at lightly loaded vehicle weight (LLVW).

Tire inflation pressure. Tires are inflated to the pressure recommended by the vehicle manufacturer for the LLVW of the vehicle.

Instrumentation

Brake temperature measurement. The brake temperature is measured by plug-type thermocouples installed in the approximate center of the facing length and width of the most heavily loaded shoe or disc pad, one per brake. A second thermocouple may be installed at the beginning of the test sequence if the lining wear is expected to reach a point causing the first thermocouple to contact the metal rubbing surface of a drum or rotor. For center-grooved shoes or pads, thermocouples are installed within 3 mm (0.12 in) to 6 mm (0.24 in) of the groove and as close to the center as possible.

Vehicle speed and stopping distance measurement. The vehicle speed measurement is performed using a calibrated rolling fifth-wheel transducer with quadrature capability. Prior to testing, fifth-wheel calibration shall be performed with maximum error not exceeding 0.5 percent of measured value as verified on a pre-measured 60-m (200-ft) test lane.

Brake pedal effort measurement. The pedal effort measurement is performed with a calibrated transducer on the brake pedal. This transducer should not interfere with normal brake application.

Brake pedal force indicator. An indication of the pedal force is to be located in view of the driver.

Ambient temperature. The ambient temperature shall be measured continuously during stopping distance testing, using a calibrated thermometer.

Anemometer. The wind speed and wind direction shall be measured continuously during stopping distance testing, using a calibrated anemometer located at the test site.

Surface temperature. The road surface is measured at the test lane with a calibrated hand-held pyrometer, prior to each test run.

Procedural Conditions

Brake control. All vehicle brake stops must be met solely by use of the service brake control.

Test speed. The vehicle is tested at a speed of 100 km/h (62.1 mph).

Stopping distance. The braking performance of a vehicle is determined by measuring the stopping distance from a given initial speed. The stop is initiated when the stop lamp circuit is closed.

Vehicle position and attitude. (a) The vehicle is aligned in the center of the lane at the start of each brake application. Steering corrections are permitted during each stop.

(b) Stops are made without any part of the vehicle leaving the lane and without rotation of the vehicle about its vertical axis of more than ± 15° from the center line of the test lane at any time during any stop.

Transmission selector control. All vehicle brake stops are made with the transmission selector in a control position recommended by the manufacturer for driving on a level surface at the applicable test speed. In initiating each test run, (a) Exceed the test speed by 6 to 12 km/h (3.7 to 7.5 mph); (b) close the throttle and coast in gear; and (c) when the test speed is reached, apply the brakes; (d) to avoid engine stall, a manual transmission may be shifted to neutral (or the clutch disengaged) when the vehicle speed is below 30 km/h (18.6 mph).

Initial brake temperature (IBT). If the lower limit of the IBT for the first stop in the test has not been reached, the brakes are heated to the IBT by making one or more brake applications from a speed of 50 km/h (31.1 mph), at a deceleration not greater than 3 m/s^2 (9.8 fps^2).

Required Test Data

Test data to be collected includes:

- Vehicle speed.
- Stopping distance.
- Brake pedal application force.
- Brake lining temperatures.
- Road Surface temperature.
- Ambient temperature.
- Tire pressure.

Road Test Procedures

1. Burnish

Vehicle conditions.

- Vehicle load is at GVWR.
- Transmission position. In gear.

Test conditions.

- IBT: 65 °C to 100 °C (149 °F to 212 °F).
- Test speed: 80 km/h (49.7 mph).
- Pedal force: Adjust as necessary to maintain specified constant deceleration.
- Deceleration: Maintain a constant deceleration of 3.0 m/s^2 (9.8 fps^2).
- Number of runs: 200 stops.
- Interval between runs: The interval from the start of one service brake application to the start of the next is either the time necessary to reduce the IBT to 100 °C (212 °F) or less, or the distance of 2 km (1.24 miles), whichever occurs first.
- Accelerate to 80 km/h (49.7 mph) after each stop and maintain that speed until making the next stop.
- After burnishing, adjust the brakes according to the manufacturers' recommendation.

2. Stopping distance test

Vehicle conditions.

- Vehicle load is at LLVW.
- Transmission position. In gear.

Environmental conditions.

- Wind speed not greater than 5 m/s.

Test conditions.

- IBT: 65 °C to 100 °C (149 °F to 212 °F)
- Test speed: 100 km/h (62.1 mph).
- Pedal force: The brake pedal is to be applied so that the pedal force is at least 500 N (112 lbs.) in 0.25 seconds or less, and a steady state application force 670 N ± 70 N (151 ± 15.7 lbs.) achieved within 0.75 seconds. The steady state application force is to be held constant until the vehicle comes to a complete stop.
- Number of runs: 10 stops.
- Test surface—dry: PFC of 0.90 to 0.95.
- Surface temperature—dry: 35 °C ± 10 °C.
- Test surface—wet: PFC of 0.80 to 0.85.
- Water depth of 3 mm (1/8 inch) or less.
- Surface temperature—wet: 27 °C ± 5 °C
- For each stop, bring the vehicle to test speed and then stop the vehicle using the pedal force application method described in Pedal force section above.

3. Water Application Procedure

For wet surface testing, water shall be applied using a water tanker truck that is equipped to distribute water evenly across the width of the test lane. Prior to wet surface testing, three passes shall be made with the water tanker truck traveling longitudinally along the test lane. The total length of the wetted area shall be at least 100 m (330 ft). Prior to each brake stop event, an additional pass shall be made with the water tanker truck along the test lane where the brake stops are to be performed. Water shall be distributed to fully wet the asphalt surface while keeping the water depth in any area of the test lane below 3 mm (1/8 inch).

4. Stopping Distance Normalization

All stopping distance measurements shall be normalized in accordance with SAE J299 SEP93, Stopping Distance Test Procedure. Stopping distance corrections for initial speed errors greater than ±3.2 km/h (±2 mph) are invalid due to inaccuracy.

$$S_c = S_m V_d^2 / V_a^2$$

where:

V_d = desired initial vehicle stopping speed, km/h (mph)
V_a = actual initial vehicle stopping speed, km/h (mph)
S_m = measured stopping distance, m (ft)
S_c = calculated stopping distance from V_d, m (ft)

V. Implementation

The agency hopes to gather data to support the NCAP brake testing program beginning with model year 2001 vehicles. The data obtained from testing these MY 2001 vehicles would not be published as consumer information, but would be used to make any refinements to the test procedure and/or data presentation. Assuming no major issues are identified in the comments on this Notice or the data gathered from the 2001 vehicles, the agency hopes to fully implement the NCAP brake program, in MY 2002, by testing and releasing the stopping distance information for the vehicles tested.

VI. Request for Comments—Questions

The agency seeks comments about topics relating to the NCAP braking program and the draft test procedure that has been developed from vehicle research. For ease of reference, the questions posed are numbered consecutively. The agency requests that commenters identify each answer they give by the number of each question being answered.

1. Based on the agency's existing brake performance requirements in the Federal motor vehicle safety standards and its experience with brake testing of light vehicles, stopping distance appears to be one of the best measures of brake performance. For the NCAP braking program, our desire is to provide consumers with a measure of brake performance that would be useful for comparing the capabilities of new vehicles. The agency requests comments about stopping distance and other measures of braking performance. Are other measures of brake performance more useful for consumer information? If so, please explain why.

2. The agency seeks to minimize driver variability by testing 4-wheel ABS-equipped vehicles only. If we were to expand the program to include non-ABS-equipped vehicles, how could we best minimize driver variability in testing non-ABS vehicles?

3. During vehicle research, the agency found that the brake pedal application rate is an important parameter in achieving consistent and short stopping distances because it reduces the driver variability for the brake application. Based on the agency's independent research, an application rate of 445 Newtons (100 lbs.) in 0.2 seconds was derived, which is almost identical to the brake application rate of 500 Newtons (112 lbs.) in 0.25 seconds specified by the Japanese for their NCAP brake testing and that we are now considering to use as well. Are these brake pedal application rates achievable for all light vehicles, including full-size sport utility vehicles, pickup trucks and vans? Are there any concerns about NHTSA using the same brake application rate specified by Japan?

4. After the initial brake application rate is achieved, the agency believes that it is important to establish additional criteria for the steady state brake application force and the time to attain that force. We have specified in the draft test protocol 670 ± 70 Newtons (151 ± 15.7 lbs.) in 0.75 seconds as the steady state force. How appropriate is this force and the specified time frame for achieving consistent stopping distance performance? Should a peak value be established in addition to the steady state force or as an alternative?

5. Straight line stops are specified for the draft NCAP procedure so as to minimize braking performance variability due to driver skill. We have also considered braking-in-a-curve, lane-change and other maneuvers where a steering maneuver is combined with braking, and concluded that straight line stops might be the most useful for consumer information. What are your views on the various maneuvers that could be used for NCAP braking? Which maneuvers do you consider to be best for consumer information, and why?

6. The agency seeks to minimize surface variability by specifying high coefficient of friction dry and wet surfaces. We specify in the draft test protocol a dry surface with a PFC of 0.90–0.95 and a wet surface with a PFC of 0.80–0.85. Are these PFC ranges appropriate for dry and wet asphalt surfaces? Would a smaller range ensure less variability in vehicle braking performance? Is such a range realistic given the variability in PFC readings from day to day and from week to week? What range would you recommend given your experience with test surface variability? How often should the PFC for the surface be measured during NCAP brake testing?

7. The agency believes that stopping distance testing in extreme ambient temperatures is likely to produce greater performance variability than testing in milder ambient temperatures, primarily because the surface temperature impact on the PFC of the surface. Japan specifies a surface temperature range for its NCAP brake testing, with the dry surface temperature between 25°C and 45°C and for the wet surface and the wet surface temperature between 22°C and 32°C. The agency seeks comments on whether such a surface temperature range is appropriate for brake testing on a dry surface and on a wet surface, and whether the range should be changed? Would specifying an ambient similar to the range specified in FMVSS No. 135, Light vehicle brake systems, 0°C–40°C, be adequate for NCAP brake testing? Would the PFC specification without any temperature requirements be adequate? Please support any recommendations for a different surface temperature range with data showing its impact on vehicle braking performance.

8. The agency has specifies in the draft test protocol that ten (10) stops be made for each test condition. Given that test driver and surface variability can be minimized but not eliminated during brake testing, we believe that 10 stops would provide a large enough sample with which to calculate an average or a 95th percentile value. The agency seeks comments on the number of stops that would be considered sufficient for providing an average or 95th percentile stopping distance value to consumers.

9. Given that the 95th percentile stopping distance is based on a calculated average and the standard deviation among the number of stops, would it be considered more appropriate for consumer use? What are the pro's and con's of providing the 95th percentile stopping distance? Is it important to convey the variability between stops as part of the stopping distance information? Why or why not?

10. The agency contemplates testing the vehicles in the lightly loaded condition only since most consumers seek braking performance information in that condition. The lightly loaded condition is defined as the unloaded vehicle weight plus 180 kg. for driver and instrumentation. For the research program, we also tested the vehicles at their gross vehicle weight rating (GVWR) and found that, as expected, stopping distances were longer than for the lightly loaded condition. Do you believe that stopping distance tests should also be conducted at GVWR? Why would this information be useful to consumers? We note that data shows that the vast majority of consumers operate their vehicles lightly loaded.

11. The agency specifies in the draft test protocol testing vehicles with the transmission selector in gear since this is the transmission position that most consumers' vehicles are in when faced with an emergency braking situation. Testing with the transmission in neutral provides a stopping distance performance that does not include the effects due to engine braking and is more appropriate for vehicle compliance testing. Which method do you believe would provide relevant or useful information to consumers? Should the stopping distance value exclude the effects of engine braking? Why or why not?

12. The water depth specified is 3mm or less for the wet pavement test. What alternative method can be used to describe a wetted surface while ensuring that no puddles or excessive standing water is present? What measurement method should be specified for measuring water depth?

VII. Public Workshop

All interested persons and organizations are invited to attend the workshop. To assist interested parties in preparing for the September 26, 2001 workshop, this agency has developed a preliminary agenda, shown below, of introductory presentations and of topics for discussion at the meeting. Requests for this agency to consider additional topics should be addressed to Mr. Jeff Woods at the address or numbers given above.

A. Purpose

NHTSA is holding a workshop to facilitate an exchange of ideas among all participants. The purpose of the workshop is to present and discuss the test protocol that has been developed for the NCAP braking program. The agency hopes that this workshop will provide opportunities for improving and refining the test protocol and other areas of the program. We plan to consider the information and the views presented at the workshop and in the subsequent written comments in developing the final braking test protocol.

B. Procedures

The agency intends to conduct the workshop informally. The Associate Administrator for Safety Performance Standards will preside at the workshop. Any person planning to participate in the workshop should contact Mr. Jeff Woods at the address and telephone number provided at the beginning of this notice, no later than September 24. 2001.

C. Agenda

i. Opening remarks
ii. NHTSA Presentation—NCAP braking program
iii. Presentations by organizations and the public
iv. Open discussion

Issued on: July 12, 2001.

Stephen R. Kratzke,

Associate Administrator for Safety Performance Standards.

[FR Doc. 01–17801 Filed 7–16–01; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration, Federal Motor Carrier Safety Administration

[Docket No. RSPA–00–7021 (PD–23(RF))]

Morrisville, PA Requirements for Transportation of ‘‘Dangerous Waste’’

AGENCY: Research and Special Programs Administration (RSPA) and Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of administrative determination of preemption.

APPLICANT: Med/Waste, Inc. and Sanford Motors, Inc.

LOCAL LAWS AFFECTED: Morrisville, Pennsylvania Ordinance No. 902.

APPLICABLE FEDERAL REQUIREMENTS: Federal hazardous material transportation law, 49 U.S.C. 5101 *et seq.*, and the Hazardous Materials Regulations (HMR), 49 CFR parts 171–180.

MODES AFFECTED: Highway.

SUMMARY: Federal hazardous material transportation law preempts the following provisions in Ordinance No. 902 of the Borough of Morrisville, Pennsylvania:

1. The definitions of ‘‘infectious waste,’’ ‘‘hospital waste,’’ and ‘‘dangerous waste’’ in Section 01 and the use of the term ‘‘dangerous waste’’ throughout the ordinance.

2. The designation of Route 1 (between the Delaware River Toll Bridge and the boundary line with the Township of Falls) as the only street in the Borough that may be used by trucks transporting dangerous waste, in Section 02.

3. The requirement that each truck transporting dangerous waste carry and have available ‘‘the manifest required for transportation of such waste under the Resource Conservation and Recovery Act, or federal or state regulations implementing that Act,’’ in Section 05(a).

FOR FURTHER INFORMATION CONTACT: Frazer C. Hilder, Office of the Chief Counsel, Research and Special Programs Administration (Tel. No. 202–366–4400), or Joseph Solomey, Office of the Chief Counsel, Federal Motor Carrier Safety Administration (Tel. No. 202–366–1374), U.S. Department of Transportation, Washington, DC 20590–0001.

SUPPLEMENTARY INFORMATION:

I. Background

A. Application for Preemption Determination

This proceeding is based on the December 30, 1999 application of Med/Waste, Inc. and its subsidiary, Sanford Motors, Inc. (collectively ‘‘Med/Waste’’) for a determination that Federal hazardous material transportation law preempts requirements contained in Ordinance No. 902 of the Borough of Morrisville, Pennsylvania (the Borough). The copy of Ordinance No. 902 attached to Med/Waste’s application indicates that this ordinance was adopted on September 20, 1999, and it regulates ‘‘the movement of infectious and chemotherapeutic wastes (hereinafter dangerous waste) by motor vehicle truck in the Borough of Morrisville.’’

In its application, Med/Waste challenged (1) the definition and use of the term ‘‘dangerous waste’’ and the definitions of ‘‘infectious waste’’ and ‘‘hospital waste’’; (2) the limitation of trucks transporting dangerous waste within the Borough to Route 1; and (3) the requirement to carry the uniform manifest required for hazardous wastes. The text of Med/Waste’s application and a March 1, 2000 letter from the Borough of Morrisville in response were published in the **Federal Register** on April 14, 2000, and interested parties were invited to submit comments. 65 FR 20258. Comments were submitted by Med/Waste, Sanitec, the Medical Waste Institute (the Institute), Biosystems, and American Waste Industries, Inc. (American). The Borough did not submit any further comments.

In comments submitted in response to the April 14, 2000 notice, Med/Waste stated that several of its drivers have received tickets for violating Ordinance No. 902, and it provided documents on citations issued on September 29 and October 8, 1999. On the summons, the fine is specified at $300, plus costs, for violations of Ordinance No. 902. Because the ‘‘location’’ is shown as Pennsylvania Avenue on each of the citations, where Med/Waste’s facility is located, it is assumed that the citations were issued for departing from Route 1.[1]

In its comments, Med/Waste also stated that Ordinance No. 902 ‘‘must be preempted in its entirety in order to preserve the integrity of the national, uniform scheme of hazardous material transportation.’’ Med/Waste and others discussed additional provisions in Ordinance No. 902 concerning speed limits, accident reporting, time limits on storage of dangerous waste, and the posting of a $50,000,000 indemnity bond with the Borough Secretary. These additional requirements are discussed generally at the end of Part III, below. However, no determination is made whether Federal hazardous material transportation law preempts these additional requirements because Med/Waste’s application did not specifically challenge or address them, and the April 14, 2000 notice in the **Federal Register** did not clearly indicate that RSPA and FMCSA would consider these other requirements or the ordinance as a whole.

B. Federal Regulation of Medical Waste Transportation

In a March 1993 notice in its rulemaking proceeding under docket No. HM–181G, RSPA discussed the Federal regulation of medical waste transportation. 58 FR 12207, 12208 (March 3, 1993). As explained there, DOT has listed and regulated ‘‘etiologic agents’’ as hazardous materials since 1972. In a 1991 final rule, RSPA accepted an industry proposal ‘‘that medical waste should be treated differently than other infectious substances.’’ *Id.* at 12209, referring to RSPA’s final rule, 56 FR 66124 (Dec. 20, 1991). At that time, RSPA concluded that medical waste should remain regulated as a hazardous material:

> Since the majority of these wastes are untreated and, thus, may potentially contain infectious substances, RSPA strongly believes that the public and transport personnel [should] be protected from the hazards of these materials during transportation.

56 FR 66142. Accordingly, RSPA has provided ‘‘less rigorous requirements’’ for regulated medical wastes than for other infectious substances. 56 FR 66131.

In the March 1993 notice, RSPA also referred to a two-year demonstration program that the U.S. Environmental Protection Agency (EPA) had

[1] In a November 29, 2000 letter, Med/Waste asked RSPA for ‘‘some indication of the estimated time of decision’’ in this matter, because dates for court hearings on these citations (which had previously been continued) were coming due. This letter and a copy of RSPA’s December 11, 2000 response have been placed in the docket.