

State	City/town/county	Source of flooding	Location	Range of BFEs Elevation in feet *(NGVD)	
				Existing	Modified
		Coal Creek Tributary— Lower Reach.	Approximately 0.5 mile upstream of North Sarah Road.	None	*1,235
			At the confluence with Coal Creek— Lower Reach.	None	*1,221
		Worley Creek—Lower Reach.	Approximately 0.6 mile upstream of the confluence with Coal Creek—Lower Reach.	None	*1,232
			Approximately 1,530 feet downstream of East Silver City Ridge Road.	None	*1,204
			Approximately 140 feet upstream of State Highway 37.	None	*1,243

Maps are available for inspection at the Town Hall, 301 West Main Street, Tuttle, Oklahoma.

Send comments to The Honorable Elberta Jones, Mayor, Town of Tuttle, Town Hall, 301 West Main Street, Tuttle, Oklahoma 73089.

(Catalog of Federal Domestic Assistance No. 83.100, "Flood Insurance.")

Dated: March 24, 2004.

**Anthony S. Lowe,**

*Mitigation Division Director, Emergency Preparedness and Response Directorate.*

[FR Doc. 04-7595 Filed 4-2-04; 8:45 am]

**BILLING CODE 9110-12-P**

**FOR FURTHER INFORMATION CONTACT:** For Non-Legal Issues: Mr. Stan Backaitis, Office of Crashworthiness Standards, NVS-110, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. Telephone (202) 366-4912. Fax: (202) 473-2629.

For Legal Issues: Ms. Rebecca MacPherson, Office of Chief Counsel, NCC-20, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. Telephone: (202) 366-2992, Fax: (202) 366-3820.

**SUPPLEMENTARY INFORMATION:** The Alliance of Automobile Manufacturers (Alliance) in a letter of July 19, 2002, petitioned the National Highway Traffic Safety Administration (NHTSA) to amend part 572 by adding two new subparts to set out specifications for the Occupant Classification Anthropomorphic Test Devices (OCATD-5 and -6) and to amend FMVSS No. 208 to allow alternative use of OCATD-5 and -6 for manufacturer certification of advanced air bag static suppression test requirements. The petition was accompanied by a University of Michigan Transportation Research Institute (UMTRI) based Technical Report containing the following attachments: (1) "Anthropometric and Performance Standards for the OCATDs" (Attachment A), (2) "Quantitative Evaluation of the Seat Pressure Measurements, Body Weight Distribution and Posture Effects on Those Measurements" (Attachment B), and (3) OCATD-5 and -6 drawing

packages (Attachments C and D, respectively).

**Issues Raised in the Petitions**

FMVSS No. 208 requires that frontal passenger air bag systems either suppress deployment or deploy in a low risk manner during frontal collisions when a small child is present. Also the manufacturer must pass the dynamic performance requirements of the standard, which usually requires deployment of the air bag for the 5th percentile female dummy. One provision of the standard specifies that suppression systems may be tested using either small adult female and six-year-old Hybrid-III dummies, or human volunteers who approximately match those body sizes. The Alliance states that:

(1) Crash test dummies are poorly suited to the development and certification of the occupant classification components of some advanced air bag systems because:

- Hybrid-III and THOR crash dummies do not produce required humanlike seat surface pressure distributions,
- Development of occupant classification systems requires testing of surrogates in a wide range of postures, but many postures that are possible for humans cannot be attained with the specified crash test dummies, and
- Hybrid-III dummies are difficult to position and may not appear humanlike to some types of sensors used for occupant classification purposes.

**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**49 CFR Part 571 and 572**

[Docket No. NHTSA 2003-11398]

**Denial of Petition for Rulemaking**

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), DOT.

**ACTION:** Denial of petition for rulemaking.

**SUMMARY:** This notice denies a two part petition submitted by the Alliance of Automobile Manufacturers (Alliance) under a cover letter of July 19, 2002. The petitioner asked the agency to amend: (1) Part 572 by adding two new subparts to set out specifications for the Occupant Classification Anthropomorphic Test Devices (OCATD-5 and -6), and (2) Federal Motor Vehicle Safety Standard (FMVSS) No. 208 specifications to allow alternative use of OCATD-5 and -6 for manufacturer certification of static suppression test requirements.

(2) Testing with human volunteers is time-consuming and requires a large number of subjects. It reduces repeatability to a level that is unacceptable for product development and would not provide the objectivity of compliance should the vehicle subsequently be tested with different human beings.

(3) The OCATD-5 and -6 should be added to FMVSS No. 208 as an optional means of certifying vehicles to the static suppression test requirements because (1) they are capable of comparable performance to the Hybrid-III 6-year-old and 5th percentile female dummies for purposes of occupant classification using pressure distribution discrimination, and (2) they offer the advantage of superior flexibility and posture capability compared to the Hybrid-III dummies.

### Background

Appendix D of the Final Rule preamble for FMVSS No. 208, "Occupant crash protection," (65 FR 30743, May 12, 2000) notes, that:

Advanced air bag systems can use various types of sensors to obtain information about crashes, vehicles and their occupants. This information can be used to adapt the performance of the air bag to the particular circumstances of the crash. As noted above, it can be used in determining whether an air bag should deploy, when it should deploy, and (if it has multiple inflation levels) at what level of inflation (pressure rise) and inflation rate (pressure rise rate).

\* \* \* \* \*

Strategies for static occupant detection systems include the ability to make a determination of whether air bag deployment is warranted (or what level of inflation is appropriate) for the size and/or position of the occupant (e.g., whether the occupant is a small child or a full-sized adult, or whether the occupant is against the seat back or is sitting on the edge of the seat, closer to the air bag). These technologies may be used in conjunction with seat weight sensing/pattern recognition systems (or seat belt use and crash severity sensing) to improve the reliability of the occupant classification and location estimates.

Furthermore, the agency noted in 65 FR 30693, May 12, 2000, that:

For our proposed static test requirements for systems which suppress air bags in the presence of infants and children (e.g., weight sensors), we proposed a new option which would permit manufacturers to certify to requirements referencing actual children, instead of 3-year-old and 6-year-old child dummies, in a stationary vehicle to test the suppression systems. (This option would not apply to systems designed to suppress the air bags only when an infant is present.) Adult human beings could also be used in the place of 5th percentile adult female dummies for the portions of those static test requirements

which make sure that the air bag is activated for adults.

The Alliance stated in its petition that:

Development and testing of occupant classification systems also requires testing surrogates in a wide range of postures, but many postures that are possible for humans cannot be attained with crash dummies. In particular, the Hybrid-III dummies are difficult to position and may not appear human-like to some types of sensor systems used for occupant classification. Testing with human volunteers, which is time-consuming and requires large numbers of subjects, reduces repeatability to a level that is unacceptable for product development and would not provide the objectivity of compliance should the vehicle subsequently be tested with different human beings.

The Alliance cited a 1999 UMTRI study in which it is claimed that "existing human surrogates, such as the Hybrid-III and THOR crash test dummies, do not produce human-like seat surface pressure distributions (Reed *et al.*, Technical Report UMTRI-99-46, 1999b)."

A similar observation was voiced in Toyota's comments to the FMVSS No. 208 Supplementary Notice of Proposed Rulemaking [NHTSA-1999-6407] for advanced air bags concerning the suitability of current test dummies and humans in automatic suppression tests. Toyota urged the agency to work initially with industry in developing better test dummies capable of activating automatic suppression systems when occupancy conditions warrant deployment suppression. Mitsubishi's comments echoed this request. Toyota claims as many as 50 percent of the tests conducted by/or on behalf of Toyota with the 5th percentile adult female test dummy did not detect the presence of that dummy at the weight needed to turn off the suppression system. Toyota also voiced dissatisfaction with the option of certifying their systems using humans who are within specified height and weight range. Toyota believes those parameters allow too much variation in physiology to make humans practical test objects. Toyota maintained that NHTSA should specify that it will conduct its compliance tests using the same test subjects or devices that vehicle manufacturers employed to certify their suppression systems.

In line with these concerns, the petitioners stated that specialized test devices need to be developed to represent humans quantitatively in at least the following set of characteristics: (1) External anthropometry, (2) accurate skeletal linkage and joints, (3) total body mass and segment masses, and (4) most

importantly, seat surface pressure distributions. As a result, the Alliance has provided financial support for the development of two such devices, called OCATDs, in the small adult female and six-year-old child configurations. In March 2000, First Technology Safety Systems (FTSS) was awarded the prime contract to develop and build the prototype OCATDs. UMTRI, as a subcontractor to FTSS, was to provide anthropometry and performance specifications for the small adult female and six-year-old child.

An initial literature search was conducted by UMTRI to establish the body dimensions and surface contours of the typical six-year-old child. This information was used to determine the anthropometric specifications for the OCATD-6. Subsequently, seat surface pressure distributions produced by sixty-eight children and small women were measured in a range of seats and postures to determine the pressure distribution performance targets for both the small adult female OCATD-5 and OCATD-6.

A second research program at UMTRI involved quantitative comparisons of the seat surface pressure distributions and weight distributions produced by the small adult female and six-year-old Hybrid-III dummies. The distributions were measured and compared to those produced by human occupants and the OCATDs [Reed *et al.*, Technical Report UMTRI-2000-38, 2000]. The quantitative comparison was made using pressure-distribution parameters that were demonstrated in the previous research to have value for occupant classification purposes. The positions and postures of the surrogates were recorded using a coordinate measurement machine to quantify the repeatability of the installation procedures. In addition, the support forces under the feet of the surrogate were recorded to evaluate the extent to which the weight borne by the seat varied with posture.

### OCATD Construction

The UMTRI report notes that initial anthropometry and weight targets for the OCATD-5 and OCATD-6 were defined by the stature and weight ranges specified in FMVSS No. 208. OCATD-5 represents a 5th percentile size small female with a stature of 1450 mm (55 in.) and weight of 46.7 kg (103 lb). OCATD-6 represents a six-year-old child with a stature of 1181 mm (46.5 in.) and weight of 23.5 kg (51.6 lb). These specifications were subsequently verified by using the Consumer Product Safety Commission and National Health

and Nutrition Examination Survey (NHANES) data bases as reference.

The OCATDs were constructed as soft, deformable, headless, and armless devices having the shape, anthropometry, and mass of the human torso and legs. The OCATD's fundamental construction is a soft deformable urethane flesh material molded over a human-like skeleton similar to a surrogate developed in prior years for the seat manufacturing industry. [Don Adams *et al*, SAE #1999-01-0627]. The OCATD skeleton is made from molded plastic with metal inserts at the joints. Pivots at the T12/L1 and L5/S1 vertebrae locations allow the spine to rotate in the sagittal<sup>1</sup> plane, and ball joints at the femur/pelvis interface allow hip rotation and leg abduction/adduction to simulate various human postures. The joints can be locked, allowing the dummy to sit erect without external support. The torso section is divided into three segments—upper thorax, abdomen, and pelvis/thighs. The abdominal segment is made of compressible urethane foam to allow the device to lean forward, and is removable to access ballast weights.

#### Torso Postures

The UMTRI report claims that the OCATD devices can be pre-positioned to three torso orientations: Normal (design), reclined to 48 degrees, and erect. The normal torso orientation of a seated occupant, as determined in the UMTRI seating study, is defined by a thorax back angle of 24.6 degrees relative to the vertical. In erect orientation, the OCATD spine joints can be locked into position for unsupported seating. The posture and torso orientation can be monitored with tilt sensors in the pelvis and spine.

#### Analysis of the Petition

The Alliance petition notes that the OCATDs have only slightly better performance than Hybrid-III 6-year-old and 5th percentile female dummies for purposes of occupant classification using pressure distribution discrimination. However, the Alliance believes the OCATDs may have the added advantage of superior flexibility and posture capability compared to the Hybrid-III devices. The Alliance thinks the results of its research will “provide quantitative guidance to manufacturers for selecting surrogates, and developing test procedures for use with advanced air bags”.

Since the Alliance petition is based primarily on UMTRI's evaluation of the

OCATDs, we have examined the UMTRI report for the benefits claimed in the Alliance petition. The UMTRI report notes that the measured seat pressure data were analyzed with three objectives:

1. To determine the pressure distribution parameters from human tests that provide the greatest ability to classify occupant size,
2. To identify performance targets for the OCATD devices with respect to seat surface distribution, and
3. To assess the performance of the OCATDs relative to the performance targets.

#### Pressure Distribution Parameters

The UMTRI report notes that of the measured data, three parameters emerged that could be used to describe the seat surface pressure distributions. UMTRI found that in sorting pressure distributions by the resulting R<sup>2</sup> value, the best predictors for normal seating posture were: (1) The PeakRowWidth<sup>2</sup> (R<sup>2</sup>=0.88), (2) CentroidRowWidth<sup>3</sup> (R<sup>2</sup>=0.86), and (3) PseudoweightLb<sup>4</sup> (R<sup>2</sup>=0.85). For non-normal seating postures, the best predictor is the PseudoweightLb (R<sup>2</sup>=0.78). Further studies indicate that correlation among parameters, using their multiples, do not substantially improve the prediction of body weight.

The analysis of a large number of pressure distribution parameters allowed UMTRI to specify and evaluate the OCATD performance. The OCATD pressure distributions are determined, to a large extent, by the weight of the occupant and the external anthropometry (hip breadth, buttock-to-knee length, *etc.*). The analysis of pressure distribution data from human subjects demonstrated that the parameters of pressure distribution that are useful for occupant classification also relate to scale (width and length of the respective contact area of the buttocks with the seat cushion). Consequently, UMTRI believes that using representative anthropometry for the OCATDs is a major part of achieving representative pressure distributions.

UMTRI noted that the observed OCATD seated pressure parameter values can be assessed by comparing them to the distribution of similar parameter values expected for people

who meet the OCATD stature and weight criteria. If the OCATD parameter values lie within one standard deviation of the target, the OCATDs are substantially representative of the occupant category. If the discrepancy is larger than two standard deviations, the OCATD parameter values are unusual for the corresponding anthropomorphic category.

Using this approach, UMTRI found the quantitative performance of the OCATDs with respect to human pressure distribution to be good. Among the top ten classification parameters, the OCATDs generally differed by less than one standard deviation from the targets. UMTRI claims that in percentage terms, the deviations from the targets are generally less than five percent.

#### Pressure Distribution Measuring Systems

UMTRI observed that defining the precision and accuracy for seat pressure distribution measurement systems is extremely difficult. A number of very difficult to control variables plague the technology of pressure measurements. For example, when a pressure mat is placed between two flat surfaces, pressure can be applied and measurements made in readily quantified ways. However, the interface between a occupant's compliant buttocks and a compliant seat is not flat, and may include substantial shear stress, as well as normal stress related pressure measurements. Thus, in actual evaluation of such compliant surfaces, it is very difficult to determine the “true” pressure. UMTRI notes that measurements of seat surface pressure distribution are at best regarded as approximate and used as relative measures only. For example, measuring the pressure distribution on two seats with the same subject might lead to the conclusion that the pressure was higher on one seat than the other. UMTRI states that the difference can not be confidently quantified within ten or 15 percent because of differences in the shape and contours of the contact area and the limitations of the sensor system. Accordingly, the ability of the OCATDs to produce consistent measurements in compliance tests would always be in question.

#### Application Issues

UMTRI indicated that pressure measurements are strongly affected by the occupant's posture. Over the range of postures and subjects studied, the effects of posture on pressure distribution may be larger than the effects of body size. This poses problems for validating the OCATD

<sup>1</sup> Sagittal—inferior/superior plane parallel to the longitudinal axis of the body.

<sup>2</sup> Lateral width of pressure distribution at fore-and aft location at the highest pressure, evaluated under contact area exceeding 10mmHg.

<sup>3</sup> Summation of pressures across all sensors multiplying by sensor area and expressing the results in pounds.

<sup>4</sup> PseudoweightLB is the product of the sensor area and pressure and is a rough measure of the weight borne by the seat cushion.

pressure distribution performance. High posture strongly affects contact area, and is one of the parameters most useful for occupant classification, making it an important factor for OCATD validity. UMTRI suggested that the OCATD should be used in a range of thigh postures from fully to minimally engaged, representing a range of the seat loading conditions expected in the field. The extremes might capture the human variance in "normal" postures and be an appropriate way to specify OCATD positioning for certification testing.

The UMTRI test data show that the OCATD pressure distributions are likely to be most representative of human pressure distributions in soft seats. In seats that are very firm, the OCATD contact area tends to be smaller than that of comparably sized humans. This is because the OCATD flesh is stiffer than that of humans. In a firm seat, the OCATD flesh does not spread as widely as the softer human tissue, and consequently produces a smaller contact area. However, UMTRI found that differences in contact areas between firm and soft seats were smaller than differences due to leg(s) postures.

#### *Repeatability and Reproducibility*

UMTRI observed that because of limitations of pressure distribution measurement technology, the OCATD itself is probably more repeatable than the sensors used to measure the contact pressures. UMTRI also found, that the posture and the positioning of the OCATD appeared to be more important than the shape or stiffness of the device in determining the seat surface pressure distribution. Hence, repeatability and reproducibility studies of the OCATDs need to focus primarily on installation variability. In addition, UMTRI recommended that procedures and test tools need to be developed to verify that soft tissue stiffness and contours of the OCATDs remain within specification.

#### *Comparison of OCATDs With Hybrid-III Dummies*

The UMTRI report claims that seat surface pressure distributions produced by the OCATDs are visually more similar to human pressure distributions than those produced by the Hybrid-IIIs. However, our review of UMTRI's quantitative analysis found that the small adult female Hybrid-III is approximately as representative of small adult women as the OCATD-5 with respect to the parameters of seat surface pressure distribution that are related to the occupant's body weight.

UMTRI found the six-year-old Hybrid-III pressure distribution parameters to

be somewhat less representative of six-year-old children than the OCATD-6. The pressure distributions were somewhat narrower and smaller in area than those obtained with humans. However, even in this respect, the data from the UMTRI study indicated that pressure distributions produced by the Hybrid-III dummies were generally within the range of variability expected for humans of similar size.

UMTRI noted that OCATD buttock contours and spacing of the peak pressure from the ischial tuberosity bones appear to be a better match to the human pressure distributions than those produced by the Hybrid-IIIs. UMTRI observed that much of the correspondence is not meaningful, because neither the contours nor the location and spacing of these peak pressures are useful for occupant classification purposes. These observations appear to project UMTRI's findings based on this specific study. However, the agency is aware that some suppression systems utilize seat map pressure sensors to classify the occupant based upon its morphology ([www.iee.lu/EN/AutoProd/](http://www.iee.lu/EN/AutoProd/)).

The only parameter in which the Hybrid-IIIs differed substantially from the OCATDs and the human targets in the UMTRI study was "PseudoweightLb". However, "PseudoweightLb" is difficult to interpret because it is affected by the shape and contours of the contact surface. The pressure distribution measurement system measures the aggregate force perpendicular to the surface of the measurement pad. However, as described above, shear stresses on compliant surfaces are in evidence and responsible for much of the measurement inaccuracies. Thus, UMTRI believes, the more flattened buttock shape of the Hybrid-III dummies may have accounted for the difference in "PseudoWeightLb" assessment.

UMTRI noted that the OCATDs are easier to position and are capable of a wider range of postures than the Hybrid-III counterparts. However, the FMVSS No. 208 advanced air bag certification test procedures do not require a large range of postures for air bag suppression testing. Thus, while there might be interest by some vehicle manufacturers to employ the OCATDs for vehicle development purposes, there is virtually no advantage in using them in FMVSS No. 208 compliance tests.

As only one of each type of OCATDs was used by UMTRI in its testing, it is possible that differences within any new surrogate category could affect the findings. These differences may become even larger through their use and as the

flesh materials age. Also, as with any study of this type, the applicability of the findings is limited to the types of seats and postures used. The characteristics of the pressure distribution measurement system would also greatly influence the test results. In particular, a pressure sensing system with lower resolution, such as most of those used by vehicle manufacturers in production seats, may show substantially larger or smaller differences between the various surrogates and the humans. Inasmuch as the Alliance has not provided estimates of potential variabilities, the agency is not in a position to address this issue.

#### *Other Considerations*

The agency has no testing experience with the OCATDs. The Alliance's (summer 2002) offer to provide the agency one of the OCATDs for evaluation purposes did not materialize in its delivery; while the agency, due to other high priorities and in expectation of receiving the OCATD, had not pursued its independent acquisition. However, in the interim, the agency has gained considerable knowledge about the OCATDs during the review of the UMTRI reports, such as their usefulness and applicability for air bag suppression purposes. In addition, a limited amount of information was also obtained when FTSS made an introductory presentation to agency staff in the spring of 2002, and at the government-industry meeting in July 2002. The latter information is available on the NHTSA Web site.

FTSS has disclosed that it has sold over 20 OCATDs. A larger portion of them are female versions. The purchasers are mostly manufacturers producing vehicles for the U.S. market. However, the agency has no knowledge on how the manufacturers are using these test devices, whether their use is providing correct signals for sensing the need to activate/deactivate deployment systems, and whether the devices can effectively replace the human population for the intended purposes.

FTSS also indicated that some users may be considering capacitive systems for activation purposes. In such systems, FTSS suggested the possibility of incorporating copper wire mesh that would be imbedded in the OCATD skin. The intention of this effort would be to simulate the capacitive properties of the human body. However, UMTRI notes that the built-in electrical properties would not necessarily reflect a particular size human. Accordingly, these types of systems by themselves may not be sufficient discriminators for suppression purposes. It appears that

manufacturers considering use of capacitive systems would have to find other methods to match the outputs of complementary weight distribution or pressure sensing systems.

#### *Summary of Analysis and Conclusions*

Review and analysis of the documents presented in the petition lead to the following observations and conclusions:

1. Contact pressure measuring technology shows the need for a substantial amount of development before it can be used reliably and repeatably for pressure distribution and pressure pattern measurements.

2. Since the choice of the in-vehicle seat based pressure sensing system is controlled by vehicle manufacturers, the agency would have great difficulty assuring the suitability and appropriateness of the OCATDs for assessing adequacy and effectiveness of any particular suppression system for the intended human population.

3. Because vehicle models and seat designs change quite frequently, the built-in pressure sensing system in a vehicle seat might be tailored for the OCATDs rather than correctly sensing the suppression for the intended population groups.

4. The supporting materials provided with the petition indicate that the proposed OCATDs are only marginally different or better, if at all, than the Hybrid-III dummies in replicating human-like seating pressure distribution measurements. Accordingly, there is virtually no advantage in using the OCATDs as substitutes for Hybrid-III dummies within the parameters currently specified for compliance suppression testing.

5. Pressure distributions for the OCATDs and Hybrid-III dummies fall within the general range of variability expected for humans of similar size. Thus the OCATDs do not provide any more effective sensing for deployment suppression than the Hybrid-III dummies.

6. The OCATDs may have some advantages for more accurate pressure measurement distribution on firmer seats, but this is still to be demonstrated.

7. Posture variations and leg support appear to have more significant effects on pressure distribution parameter measurements than the occupant's weight and size. Procedures to stabilize the OCATD set-up and assure consistency of contact pressure measurements are still to be established.

8. The agency has no knowledge that the OCATDs are easier to position than comparable Hybrid-III dummies for certification purposes. Considering the

small size and low weight of the Hybrid-III small female and 6-year-old dummies, the agency does not believe the supplied data support significant use advantages between the two dummy types.

9. While the petitioner notes that the OCATDs offer a significantly wider range of postures than Hybrid-III dummies, the agency compliance requirements limit the application of the female dummy to only one posture and the six-year-old to four seated posture configurations (normally seated, leaning against the door, reclined and full up front) in suppression tests.

10. The agency has not tested or evaluated either of the petitioned OCATDs or pressure sensing instruments. Agency personnel would have to develop technical expertise and equipment to deal with the devices and the various sensing technologies as well as their limitations for no apparent benefit.

11. To test, evaluate, and incorporate the OCATDs, as petitioned by the Alliance, would require a large expenditure of scarce agency resources and divert them from work that would yield far greater safety benefit.

12. In view of the limitations and/or questionable usefulness of the OCATDs for occupant sensing, their alternate use for compliance certification would not be acceptable either from the safety assurance point of view or for avoidance of claims and counterclaims on the appropriateness of the test results with respect to human test subjects.

13. The agency sees no reason why vehicle manufacturers should not use the OCATDs for their own purposes as opposed to aid in certification, if they are convinced that OCATDs will provide them superior flexibility in the design of better functioning air bag suppression systems. However, the agency sees neither any advantages nor need in using the OCATDs within the parameters currently specified for deployment of suppression certification tests.

#### **Summary of Agency Position and Decision**

The agency has decided to deny the Alliance petition to incorporate the OCATD-5 and -6 test devices into part 572. The agency finds that the Alliance has not provided compelling evidence that would support the need to specify the OCATD-5 and -6 devices as alternates to the Hybrid-III small female and the six-year-old dummies, or human volunteers, in FMVSS No. 208 for suppression certification tests. The Alliance documentation failed to demonstrate how use of the OCATDs

would provide an advantage due to their superior flexibility and posture capability in the currently specified agency test procedure. Accordingly, the agency is also denying the Alliance petition for alternate use of OCATD-5 and -6 for manufacturer certification to static suppression test requirements in FMVSS No. 208.

Agency analysis of the petitioner's data indicates that of the two OCATDs, only the OCATD-5 appears to have marginally better pressure distribution indications than the respective Hybrid-III dummy. Even so, both OCATDs and Hybrid-III dummies fall within the general range of variability expected for humans of similar size. In addition, the agency has no substantiating evidence to verify the Alliance claim that OCATDs are easier to position than comparable Hybrid-III dummies. Considering the small size and low weight of the Hybrid-III small female and the 6-year-old dummies, and the few positions specified for FMVSS No. 208 certification, the agency believes the supplied data do not support OCATDs' use for static air bag deployment suppression tests.

The agency does not agree with the Alliance assertion that development and testing of occupant classification systems, as currently specified in the agency compliance procedures, require testing surrogates capable of a wide range of postures. It needs to be noted that agency compliance specifications limit the female dummy set-up to only one posture for suppression testing and four different postures for the six-year-old. The agency has had no difficulties in its tests to attain the required positions and postures with the respective Hybrid-III dummies. Furthermore, GM and Honda have already certified advanced static suppression systems without indication of the need for OCATDs to advance this technology.

We agree with the Alliance that testing with human volunteers is time-consuming and requires large numbers of subjects. However, none of the available human surrogates will assure 100 percent suppression effectiveness. The agency allowed testing with humans in order to permit those vehicle manufacturers who are uncomfortable with the results from dummy tests to certify the suppression systems with suitable human vehicle occupants.

Our review of the contact pressure measuring technology for shaped and conforming seat cushions show the need for a substantial amount of further research before "true" pressure measurements can be made. Accordingly, the agency believes the

application of OCATDs for compliance certification is premature. Without reasonably standardized pressure measuring technology, the consistency of the OCATDs' performance can not be properly evaluated.

The agency has made provisions in the advanced air bag rulemaking to allow introduction of new technologies for suppression and the development of low level deployment activation systems. However, agency review of the proposed OCATD technology, based on the Alliance report, indicates that the OCATDs mostly parallel the capabilities of currently specified Hybrid-III test dummies for measuring seating pressures and do not provide additional occupant sensing and discrimination capabilities. The data in the UMTRI technical report indicate that there is very little potential to develop the OCATDs into better or more powerful discriminatory tools without substantial further research. Therefore, it would not be cost beneficial for the agency to initiate the extensive and expensive process incorporating the OCATDs into part 572 merely to have them available as parallel surrogates to the Hybrid-III dummies. However, the agency does not discourage use of the OCATDs by those vehicle manufacturers who are convinced that OCATDs will provide them the needed flexibilities for the development of better functioning suppression systems.

In conclusion, NHTSA denies both parts of this petition for rulemaking based on lack of compelling evidence that adoption of the OCATDs into part 572 and their specification in FMVSS No. 208 would improve the suppression and activation/deactivation of air bag systems and the safety of the motoring public. Furthermore, the agency has no plans to conduct research on design and performance of the OCATDs with the intent purpose either to incorporate them into part 572 or to specify their use for deployment suppression certification tests in FMVSS No. 208.

**Authority:** 49 U.S.C. 30162; delegations of authority at 49 CFR 1.50 and 49 CFR 501.8

Issued on: March 30, 2004.

**Claude H. Harris,**

*Director, Office of Crash Avoidance Standards.*

[FR Doc. 04-7546 Filed 4-2-04; 8:45 am]

**BILLING CODE 4910-59-P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018-AJ08

#### **Endangered and Threatened Wildlife and Plants; Proposed Removal of *Helianthus eggertii* (Eggert's Sunflower) From the Federal List of Endangered and Threatened Species and Determination That Designation of Critical Habitat Is Not Prudent**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule and notice of finding.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to remove the plant *Helianthus eggertii* (Eggert's sunflower) from the List of Endangered and Threatened Wildlife and Plants pursuant to the Endangered Species Act of 1973, as amended (Act), because recovery actions have secured a number of populations and identified additional populations not previously known. Therefore, the threatened designation no longer correctly reflects the current status of this plant. This action is based on a review of all available data, which indicates that the species is more widespread and abundant than was documented at the time of listing, is more resilient and less vulnerable to certain activities than previously thought, and is now protected on Federal, State, and county lands. Due to the recent development of a management plan for *H. eggertii*, a management plan for the barrens/ woodland ecosystem, and an Integrated Natural Resources Management Plan at the U.S. Air Force's Arnold Engineering and Development Center, on whose land a significant number of sites/ populations occur, new management practices will include managing for, and monitoring the areas that contain, this species. Occurrences of *H. eggertii* are also found on six other Federal, State, or county lands, three of which now have conservation agreements with us to protect, manage, and monitor the species.

At the time of listing, there were 34 known *Helianthus eggertii* sites occurring in 1 county in Alabama, 5 counties in Kentucky, and 8 counties in Tennessee. The species was not defined in terms of "populations" at that time. Increased knowledge of *H. eggertii* and its habitat has resulted in increased success in locating new plant sites. Presently, there are 279 known *H. eggertii* sites (making up 68 populations)

distributed across 2 counties in Alabama, 9 counties in Kentucky, and 15 counties in Tennessee. Consequently, *H. eggertii* is not likely to become endangered within the foreseeable future throughout all or a significant portion of its range and, therefore, is no longer considered to be threatened. If made final, this rule would remove *H. eggertii* from the list of threatened and endangered species.

In response to a court order, we have also reconsidered whether designating critical habitat for *Helianthus eggertii* would be prudent based on this species' current status. We have determined that such a designation would not be prudent because, as set out in detail elsewhere in this proposal, we believe the species no longer warrants listing under the Act. There is accordingly no area which meets the definition of critical habitat.

**DATES:** We will consider comments on this proposed delisting if they are received by June 4, 2004. Public hearing requests must be received by May 20, 2004.

**ADDRESSES:** If you wish to comment on this proposed delisting, you may submit your comments by any one of several methods:

1. You may submit written comments and information to the Field Supervisor, U.S. Fish and Wildlife Service, 446 Neal Street, Cookeville, TN 38501.

2. You may hand-deliver written comments to our Tennessee Field Office at the above address or fax your comments to 931/528-7075.

Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Timothy Merritt at the above address (telephone 931/528-6481, extension 211; facsimile 931/528-7075).

#### **SUPPLEMENTARY INFORMATION:**

##### **Public Comments Solicited**

We intend that any final action resulting from this proposed delisting will be as accurate and as effective as possible. Therefore, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested parties concerning this proposed delisting. We particularly seek comments concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Helianthus eggertii*;
- (2) Additional information concerning the range, distribution, location of any