



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

APR 12 2004

Mr. Andrew N. Romach
URS Corporation
1600 Perimeter Park Drive
Morrisville, NC 27560

Ref. No. 03-0253

Dear Mr. Romach:

This is in response to your letter requesting clarification on the requirements applicable to fuel cell vehicles being transported by aircraft under the Hazardous Material Regulations (HMR; 49 CFR, Parts 171-180). In a telephone conversation, you stated that the fuel cell components, known as Polymer Electrolyte Membranes (PEM), do not contain hazardous materials. Specifically, you ask whether "Vehicle, flammable gas powered," UN3166 is the most appropriate proper shipping name for three scenarios as presented in your letter, and whether three additional scenarios would be excepted from the requirements of the HMR.

The scenarios for which you ask whether "Vehicle, flammable gas powered," UN3166 is the most appropriate proper shipping name are as follows:

1. A fuel cell vehicle with the hydrogen storage cylinder and the fuel cell intact. The vehicle contains a wet acid battery or a nonspillable battery. The fuel tank and fuel systems are emptied and securely closed as required by § 173.220(d)(2).
2. A fuel cell vehicle with the hydrogen storage cylinder removed. The fuel cell is intact, but contains no residual hydrogen. The vehicle contains a wet acid battery.
3. A fuel cell vehicle with the hydrogen storage cylinder and the fuel cell removed. The vehicle contains a wet acid battery.



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§ 173.159 (d)
§ 173.220 (b)(2)

Your understanding of the HMR is correct. The proper shipping name "Vehicle, flammable gas powered," UN3166 is the most appropriate proper shipping for the three scenarios described above. The fuel cell vehicles may be transported by cargo aircraft only and the applicable provisions and requirements in §§ 173.159 and 173.220 for batteries and vehicles, respectively, must be met.

You also ask whether the following scenarios are excepted from the HMR:

1. A fuel cell vehicle with the hydrogen cylinder removed. The vehicle contains a nonspillable battery meeting the requirements of § 173.159(d).
2. A fuel cell vehicle with the hydrogen cylinder and the fuel cell removed. The vehicle contains a nonspillable battery meeting the requirements of § 173.159(d).
3. A fuel cell vehicle with the hydrogen cylinder, fuel cell and battery removed.

The answer is yes. The three scenarios, as described above, are not subject to the requirements of the HMR.

I hope this information is helpful. Please contact this office with any additional questions.

Sincerely,



Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards

URS

August 22, 2003

Mr. Ed Mazzullo, Director
Office of Hazardous Material Standards
Research and Special Programs Administration
U.S. Department of Transportation
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McIntyre
§173.159(d)
§173.220(b)(2)
Proper Shipping
Name
03-0253

Dear Mr. Mazzullo:

I am writing to you to request a written regulatory interpretation clarifying which is the most appropriate proper shipping name to use when shipping a hydrogen gas powered fuel cell vehicle powered by air transportation under various scenarios described below:

Is "Vehicle (flammable gas powered)" the most appropriate proper shipping name for the following scenarios by air transport?

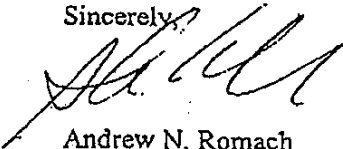
1. Fuel Cell Vehicle with the hydrogen storage cylinder intact [fuel tank and fuel system emptied and securely closed as required by 49 CFR 173.220(b)(2)] and the fuel cell intact (containing either a wet acid battery or nonspillable battery).
2. Fuel Cell Vehicle with the hydrogen storage cylinder removed but the fuel cell intact (containing a wet acid battery). (The fuel cell would contain no residual hydrogen.)
3. Fuel Cell Vehicle with the hydrogen storage cylinder and the fuel cell removed, but containing a wet acid battery.

Would the following scenarios be considered not regulated for air transport? [49 CFR 173.166(d) allows vehicles with airbags/seatbelt pretensioners installed in the vehicle to be shipped as not regulated.]:

1. Fuel Cell Vehicle with hydrogen cylinder removed but the fuel cell intact, containing a nonspillable battery that meets the requirements of 49 CFR 173.159(d).
2. Fuel Cell Vehicle with hydrogen cylinder and fuel cell removed, containing a nonspillable battery that meets the requirements of 49 CFR 173.159(d).
3. Fuel Cell Vehicle with hydrogen cylinder, fuel cell, and battery removed.

Thank you for your consideration of this request.

Sincerely,



Andrew N. Romach
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