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

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

OCT 18 2002

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

Ref No. 02-0120

Dear Mr. Romach:

This responds to your letter regarding an internal combustion engine containing residual flammable liquids, such as gasoline or aviation fuel, under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) that is transported as cargo on a transport vehicle. Your questions are paraphrased and answered as follows:

Q1. We offer, for transportation by motor vehicle, internal combustion engines containing residual flammable liquid fuel in quantities of less than 500 mL (17 ounces) in accordance with § 173.220(b)(1). Are we eligible for the exceptions provided under § 173.220(e)(1)?

A1. The answer is yes. Except for other hazardous materials specified in § 173.220(d)(2), internal combustion engines shipped under the provisions of § 173.220 are not subject to any additional requirements of the HMR when transported on a transport vehicle.

Q2. Can an internal combustion engine be defined as "mechanical equipment" under the modal exceptions in § 173.220(b)(4) and, therefore, contain a quantity of flammable liquid fuel greater than 500 mL (17 ounces)?

A2. The answer is no. Only mechanical equipment and self-propelled vehicles may be offered for transportation containing a quantity of fuel greater than 500 mL (17 ounces). Mechanical equipment or apparatus will normally contain a fuel tank, a battery, or both, of which an internal combustion engine will be an integral part.

Q3. The engines we offer for transportation are very large and, with the fuel tanks removed, the fuel lines contain residual fuel that cannot be drained to a quantity of 500 mL (17 ounces) or below. How may an internal combustion engine be described and classed for transportation on a transport vehicle if it does not meet the definition of "mechanical equipment" under the context of § 173.220(b)(4)?

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173.220(b)(4)

A3. An internal combustion engine with fuel lines containing more than 500 mL of residual flammable liquid fuel in Packing Group II, such as gasoline, must be offered for transportation in UN standard packaging based on the description and hazard class of the fuel itself, or under the terms of a DOT exemption.

In a telephone conversation with Mr. Michael Stevens of my staff you also posed a scenario where the internal fuel capacity of an aviation turbine engine was determined to be less than 450 liters (119 gallons) and the engine contained residual flammable liquid fuel (> 500 mL) with a flash point above 38 °C (100 °F). You inquired whether the engine may be excepted from the HMR under the combustible liquid in non-bulk packaging provisions in § 173.150(f)(2).

The answer is yes. A flammable liquid with a flash point between 38 °C (100 °F) and 60.5 °C (141 °F) that does not meet the definition of any other hazard class may be reclassed as a combustible liquid when offered for transportation by motor vehicle. A combustible liquid in a non-bulk packaging may be excepted from the requirements of the HMR under the conditions specified in § 173.150(f).

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

Hattie L. Mitchell

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

URS

Stevens
§173.220 (b)(1)
Proper Shipping Name
02-0120

April 23, 2002

Mr. Ed Mazzullo, Director
Office of Hazardous Material Standards
Research and Special Programs Administration
U.S. Department of Transportation
400 7th Street, SW
Washington, DC 20590-0001
FAX: (202) 366-3012

Dear Mr. Mazzullo:

I am writing to you to request a written regulatory interpretation concerning the appropriate scenario for shipping by ground transportation an internal combustion engine disconnected from its fuel tank and the fuel tank is not part of the shipment. The engine contains a residual amount of fuel (such as gasoline), but the engine is securely plugged and capped to prevent leakage during transit and contains no other hazardous materials except for the fuel. I have two questions:

1. If the engine contains up to 500 ml (17 ounces) of fuel, would the engine meet the requirements of 49 CFR 173.220(b)(1) and be excepted from the hazardous material regulations in 49 CFR 173.221(e)?

2. If the engine contains greater than 500 ml (17 ounces) of fuel, would the engine meet the definition of "mechanical equipment" as listed in 49 CFR 173.220(b)(4)? In this instance, the fuel tank has been removed from the engine so that it is irrelevant for the fuel tank to be securely closed. Would plugging and capping the fuel lines securely to ensure that they do not leak be sufficient to meet these requirements? This particular engine is very large, and although it only contains a residual amount of fuel, even after the engine has been drained and purged, more than 500 ml of fuel could remain dispersed throughout the lines. If the engine disconnected from its engine is unable to take advantage of the modal exception in 49 CFR 173.220(b)(4), what would be the appropriate proper shipping name, UN number and appropriate scenario for shipping this engine by ground transportation?

I appreciate your consideration of this matter.

Sincerely,

Andrew N. Romach
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URS Corporation

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