CONCURRENCES	
RTG. SYMBOL	PHH-11
INITIALS/SIG.	KAL
DATE	1-9-12
RTG. SYMBOL	PHH-11
INITIALS/SIG.	DBS
DATE	1-10-12
RTG. SYMBOL	PHH-21
INITIALS/SIG.	Steve H
DATE	1/19/12
RTG. SYMBOL	PHH-4
INITIALS/SIG.	CMB
DATE	1/30/12
RTG. SYMBOL	
INITIALS/SIG.	
DATE	
RTG. SYMBOL	
INITIALS/SIG.	
DATE	
RTG. SYMBOL	
INITIALS/SIG.	
DATE	
RTG. SYMBOL	
INITIALS/SIG.	
DATE	

FEB - 6 2012

Mr. Robb Boros
Patterson Companies, Inc.
1905 Lakewood Drive
Boone, Iowa 50036

Reference No.: 11-0313

Dear Mr. Boros:

This is in response to your letter of December 16, 2011, requesting information on the shipment of dry batteries containing potassium hydroxide under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q1. For the entry, "Batteries, dry, sealed, n.o.s.," what constitutes a battery being considered dry?

A1. The dry batteries described in § 172.102, Special Provision 130 have gelled alkaline electrolytes absorbed by the contents of the battery. While these batteries are not completely free of moisture they may be used in any orientation which allows them to be used in portable power applications. Common dry batteries include alkaline-manganese, zinc-carbon, nickel-metal hydride, and nickel cadmium. These batteries are distinct from "Batteries, wet, non-spillable" and "Batteries, dry, containing potassium hydroxide solid."

Q2. Is the term "sealed" as it is used in § 172.102, Special Provision 130 specifically mean hermetically sealed?

A2. Yes, § 172.102, Special Provision 130 specifically uses the term "hermetically sealed" to describe the batteries covered by the entry "Batteries, dry, sealed, n.o.s."

Q3. Do the terms "sealed" and "non-spillable" as they are used in the HMR have independent definitions, and should not be used interchangeably?

A3. Yes. Non-spillable refers to a type of wet electric storage battery with acid that is either gelled with silica or absorbed in a mat of micro-glass fibers. Batteries may be considered as non-spillable if they are capable of withstanding the vibration and pressure differential tests specified in § 173.159(f). Sealed batteries are hermetically sealed batteries of the type described in § 172.102, Special Provision 130.

Q4. If a dry battery contains potassium hydroxide, is "Batteries, dry, containing potassium hydroxide solid" the most appropriate proper shipping name?

A4. The entry "Batteries, dry, containing potassium hydroxide solid" should be used to describe non-activated batteries which contain dry potassium hydroxide and which are intended to be activated prior to use by the addition of an appropriate amount of water to the individual cells. This proper shipping name does not apply to common household batteries such as alkaline-manganese, zinc-carbon, nickel-metal hydride and nickel cadmium which are most appropriately described as "batteries, dry, sealed, n.o.s."

Q5. Can a battery that contains potassium hydroxide or similar caustic material in a form that can flow from the battery still be considered a dry battery?

A6. No. Batteries that contain liquid electrolyte which could flow out of the battery if the battery case is cracked must be described as "Batteries, wet, filled with acid" or "Batteries, wet, filled with alkali" as appropriate.

I hope this answers your inquiry. If you need additional assistance, please contact the Standards and Rulemaking Division at (202) 366-8553.

Sincerely,

Ben Supko
Acting Chief, Standards Development
Standards and Rulemaking Division

U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

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Sincerely,

Ben Supko
Acting Chief, Standards Development
Standards and Rulemaking Division

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Leary
§ 172.101
§ 172.102 SP 130
§ 173.159
Batteries
11-0313

December 16, 2011

Office of Hazardous Materials Standards
Pipeline and Hazardous Materials Safety Administration
Attn: PHH-10,
U.S. Department of Transportation
1200 New Jersey Avenue, SE, East Building
Washington, DC 20590-0001

Please find below several questions regarding batteries. Please refer to the attached SDS for several batteries and any additional chemical data.

- Regarding the entry Batteries, dry, sealed, n.o.s., what constitutes a cell being considered dry?
- Am I correct that the reference to "sealed" in Special provision 130 specifically means hermetically sealed?
- Is it accurate to state the terms "sealed' and "non-spillable" have different, independent definitions and should never be used interchangeably?

According to the attached SDS's, each of the batteries are identified as dry batteries and indicate they are not regulated for transport.

However, each of these batteries contains Potassium hydroxide [KOH]. KOH is listed in the table in both in solid [UN1813] and solution [UN1814] forms. Even low concentrations of KOH solutions indicated the material maintains corrosive characteristics [see attached KOH SDS]. The same appears to be true with Sodium hydroxide in low concentrations that can be found in one of the battery examples.

- If a dry battery contains KOH, wouldn't ***Batteries, dry, containing potassium hydroxide solid*** be the most accurate proper shipping name?
- Conversely, If a battery contains KOH or any similarly caustic material in a form that can flow or "ooze" it would no longer eligible for shipping descriptions describing a dry battery?

Thank you

Robb Boros
Compliance Coordinator
Patterson Companies, Inc.
Patterson Logistics Services, Inc.
1905 Lakewood Drive
Boone, Iowa 50036
515.433.1700

SDS Attachment List

1. Duracell Alkaline Batteries.pdf
2. GP NiMH Batteries.pdf
3. Panasonic NiCd Batteries.pdf
4. Sanyo NiCd Batteries.pdf
5. KOH 5% - MID.pdf
6. KOH 5% - SS.pdf
7. KOH 10% - SL.pdf
8. KOH 10% - SS.pdf
9. NaOH 5% - SL.pdf
10. NaOH 5% - SS.pdf
11. NaOH 10% - SL.pdf
12. NaOH 10% - SS.pdf