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Universal Waste Rule/Solar Panel and Lithium Battery Universal Waste Proposed Rule: Association of State and Territorial Solid Waste Management Officials Submit Comments to U.S. Environmental Protection Agency

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The Association of State and Territorial Solid Waste Management Officials (“ASTSWMO”) submitted comments to the United States Environmental Protection Agency (“EPA”) addressing a Solar Panel and Lithium Battery Universal Waste

Proposed Rule (“Proposed Rule”).

EPA is seeking comments from ASTSWMO in accordance with the Federal Consultation process provided by Executive Order 13132.

ASTSWMO’s Hazardous Waste Subcommittee and Lithium Battery Workgroup are stated to have drafted the comments.

ASTSWMO describes itself as representing the 50 states, 5 territories, and the District of Columbia to enhance and promote effective state and territorial programs and to affect relevant national policies for waste and materials management, environmentally sustainable practices, and environmental restoration.

The Arkansas Department of Energy and Environment – Division of Environmental Quality Office of Land Hazardous Waste Compliance Branch Manager, Brad Toler, serves on the ASTSWMO Hazardous Waste Subcommittee.

EPA had previously stated that it was considering proposing:

- Adding hazardous waste solar panels to the Resource Conservation and Recovery Act (“RCRA”) Universal Waste Regulations.
- Establishing a new/distinct category of universal waste specifically tailored to lithium batteries.

Because of the explosion of clean energy infrastructure projects, EPA has focused attention on the disposition of these two clean energy components at end-of-life.

EPA has further indicated that hazardous waste testing of solar panels determined that different varieties may have varied metals present in the semiconductor and solder. Metals such as lead and cadmium are projected to be present in some circumstances such that they could be considered characteristic RCRA hazardous waste. However, the federal agency had noted that whether a particular solar panel would be a characteristic hazardous waste can vary, even within the same model and manufacturer.

Nevertheless, because the United States is expected by 2030 to generate as much as one million tons of solar panel waste, EPA believes consideration should be given as to the standards of their dispositions.

Similar concerns have been articulated by EPA as to lithium batteries because of their use in electric vehicles. In the case of lithium-ion batteries, they are already typically deemed RCRA hazardous waste (and/or designated universal waste). Instead, EPA's concern is that the possibility for fires when improperly managed represents a risk that needs to be addressed by modified universal waste regulations.

The purpose of the RCRA Universal Waste regulations is to provide a stream-lined hazardous waste management system. They are intended to encourage environmentally-sound collection and proper management of the waste within the system.

ASTSWMO's comments indicate support of EPA promulgating regulations to include solar panels as universal waste. The organization notes:

- Solar panels can be challenging to handle at end-of-life.
- Some solar panels contain hazardous constituents including lead and silver.
- Constituents can vary by manufacturer or vary within the same manufacturer, depending on the raw materials used.
- Making an accurate hazardous waste determination on each solar panel sent for recycling and disposal can be challenging.
- Allowing solar panels to be managed as universal waste will reduce the burden associated with making a hazardous waste determination.
- A large number of solar panels will reach their end-of-life in the upcoming years.

Challenges that ASTSWMO believes needs to be addressed in EPA's rulemaking and guidance include:

1. How are solar panels on residential structures that reach their end of life handled? Do they meet the definition of household hazardous waste and thus are exempt from RCRA regulation? Or are they subject to RCRA regulation because the household hazardous waste exemption does not apply? Designating these wastes as universal waste will ease the burden related to RCRA requirements; however, the underlying determination as to RCRA applicability still needs to be addressed.
2. If generators of waste solar panels choose not to manage the solar panels as universal waste, how should a hazardous waste determination be made? Is a hazardous waste determination required on each specific component? We believe consistent guidance is necessary to ensure a level playing field among entities managing solar panels that have reached their end of life.

As to lithium batteries, ASTSWMO supports promulgation of regulations to include specific requirements for lithium batteries under the universal waste designation. Such batteries are stated to present significant challenges:

...that were not envisioned when the original universal waste battery regulations were written.

Specific challenges the organization believes needs to be addressed in the rulemaking include issues associated with:

- Notification.
- Financial Assurance.

- Hazardous Secondary Material and Commercial Chemical Product Provisions.
- Preparedness, Prevention, and Emergency Procedures.
- Employee Training.
- Accumulation.
- Accumulation of Damaged Lithium Batteries.
- Allowable Handler Activities.
- Labeling of Non-DDR Universal Waste Lithium Batteries.

A copy of the comments can be downloaded [here](#).