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**STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTE MANAGEMENT AND PREVENTION DIVISION
HAZARDOUS WASTE MANAGEMENT PROGRAM**

PROCEDURE ADDRESSING THE MANAGEMENT AND DISPOSAL OF AEROSOL CANS

Original: September 26, 2011

§ 1. PURPOSE AND AUTHORITY

- (a) Purpose. This technical guidance document describes allowable management options for waste aerosol cans generated by typical industrial and commercial applications; it does not address management and disposal options for household-generated aerosol cans. Homeowners are encouraged to contact your Solid Waste District for information on environmentally responsible disposal.
- (b) Authority. This procedure was adopted under the Vermont Hazardous Waste Management Regulations (VHWMR) and is an explanation of a generator's obligations when treating or disposing of empty or partially empty aerosol cans that may contain hazardous waste.

§ 2. BACKGROUND

Waste aerosol cans consist of three types of materials:

(1) the metal can, (2) the "product" contained in the can, and (3) the propellant. Residual product or propellant (or both) may cause a can to be regulated as hazardous waste under the VHWMR, and it is the responsibility of the generator of the waste to make that determination. See the Waste Determination Factsheet for more information: <http://www.anr.state.vt.us/dec/ead/sbcap/pdf/hwdeterminationfs.pdf>

Store aerosol cans that are hazardous waste in a separate container from that used to store non-hazardous waste cans.

§ 3. EMPTY AEROSOL CANS

- (a) For the purposes of the VHWMR, aerosol cans are considered empty when:
- The product has been expelled from the can and only residue remains; AND
 - The pressure in the can is at or very near atmospheric pressure at normal room temperature.
- (b) Once a can is empty, it can be disposed of in the regular trash or, preferably, recycled as scrap metal **unless** it contained a P-listed chemical. Any aerosol can that contained a P-listed chemical **MUST** be managed as hazardous waste even when empty (see VHWMR Section 7-215).
- (c) Empty aerosol cans shall be stored separately from partially full or full hazardous waste aerosol cans. Puncturing of empty aerosol cans in accordance with the requirements of Sections 6 and 7 of this procedure is acceptable.

§ 4. NON-HAZARDOUS PRODUCTS/PROPELLANT

Waste aerosol cans that contain non-hazardous products and propellant may be disposed of in the regular trash. However, in some instances, cans containing non-hazardous product and/or propellant may still exhibit the hazardous waste characteristic of reactivity (see VHWMR Section 7-207), typically because of the potential to explode when subjected to heat or other initiating source. Each generator must consider whether or not a waste aerosol can is a reactive hazardous waste using their knowledge of the product (a generator may refer to the product label, MSDS, or other product information to assist with the waste determination).

Waste aerosol cans that contain non-hazardous product and propellant should be stored separately from partially-full or full hazardous waste aerosol cans. Puncturing of non-hazardous aerosol cans is acceptable.

§ 5. HAZARDOUS PRODUCTS AND PROPELLANT

- (a) A partially-full or full discarded aerosol can is a hazardous waste if the can contains:
- A product or propellant that exhibits one or more of the characteristics of ignitability, corrosively, reactivity, or toxicity; and/or

- A U-listed chemical (see VHWMR Appendix III); or
- A P-listed chemical or the residue of a P-listed chemical (see VHWMR Appendix IV)

NOTE: Each generator must determine if waste aerosol cans exhibit the hazardous waste characteristic of reactivity using their knowledge of the product and propellant.

(b) Pesticides, Herbicides, and Rodenticides

Aerosol cans that contain pesticides, herbicides, or rodenticides are regulated in Vermont by the Agency of Agriculture Foods, and Markets and the Federal Insecticide, Fungicide, and Rodenticide Act (FIRFA). Follow the manufacturer's instructions on proper disposal.

§ 6. USE OF AEROSOL CAN PUNCTURING DEVICES

Waste aerosol cans that are full, partially full or empty may be punctured to make them more amenable to recycling as scrap metal. If, prior to puncturing, the can is regulated as hazardous waste (i.e., exhibits a characteristic or is listed), the puncturing and draining of those cans is considered "generator treatment" of hazardous waste. VHWMR Section 7-502(o) requires all generators to notify the Secretary about their hazardous waste treatment process(es). A form for such notification can be found at: <http://www.anr.state.vt.us/dec/wastediv/rcra/pubs.htm>

§ 7. AEROSOL CAN PUNCTURING CONDITIONS

(a) The puncturing, waste collection, and disposal of aerosol cans and the collected residuals must be conducted in compliance with all applicable federal, state, and local waste (solid and hazardous waste) and occupational safety and health laws and regulations.

(b) If you choose to treat (puncture) full or partially-full aerosol cans that are hazardous waste, the following conditions must be met:

- (1) The generator notifies the DEC of their treatment of hazardous waste;
- (2) The device is designed for the purpose of puncturing aerosol cans and is protective of human health and the environment;
- (3) The device is operated in accordance with all manufacturer specifications/recommendations;
- (4) All materials released upon puncturing are captured -- liquid and vapors (i.e. must be equipped with a VOC filter and/or other pollution prevention device);
- (5) The device is affixed to a collection container that that is managed, marked and labeled in accordance with the container management requirements of VHWMR 7-310 and 7-311;
- (6) All residual liquids and vapor are compatible with each other and the container. If compatibility is a concern, a generators should use multiple containers to collect process residuals (e.g., one drum for aerosol lubricants, one drum for paints, one drum for chlorinated solvent aerosols);
- (7) The collection container is kept closed unless adding or removing waste. A drum with an affixed puncturing device is considered closed if the puncturing device lid is closed and secured and a VOC filter is in place;

The generator develops a company-specific procedure that specifies:

- (A) What type(s) of waste aerosol cans are being punctured (i.e. materials contained/ type of propellant) to ensure compatibility of collected residuals and identify potential reactivity;
 - (B) A schedule/procedure for maintaining the puncturing/treatment equipment and air pollution control device;
 - (8) The generator ensures that collected residuals are properly characterized, maintains a log that identifies the material contained in each can together with the date of treatment and the person conducting the treatment.
- NOTE:** The appropriate waste codes and identification of underlying hazardous constituents (used to meet LDR requirements) may be identified from this log;
- (9) Collected residuals are managed and disposed of as hazardous waste;
 - (10) A hazardous waste determination is completed for the spent VOC filter (used for pollution control) prior to disposal of the filter (i.e., by generator knowledge or test for any hazardous waste toxicity characteristic constituents that are present in the products collected from the aerosol cans);

- (11) The generator ensures that all personnel operating the puncturing device have been trained in the proper operation of the equipment and the company-specific procedure. Training of personnel to operate the equipment must be documented.

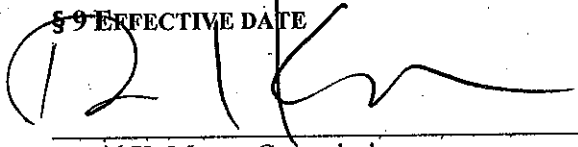
NOTE: Aerosol cans of P-listed waste cannot be punctured and must be disposed of as hazardous waste.

- (c) Generators may accumulate waste cans prior to puncturing/treatment for up to one year in accordance with VHWMR 7-310(a) or (b).
- (d) The Vermont Department of Environmental Conservation does not provide any type of certification, approval or endorsement regarding the design, use, and safety of aerosol can puncturing equipment.

§8 CONTAINERS OF AEROSOL CANS AFTER PUNCTURING

After cans have been punctured and drained in accordance with this guidance document, they may be discarded as solid waste or recycled as scrap metal. The DEC recommends that punctured aerosol cans be recycled.

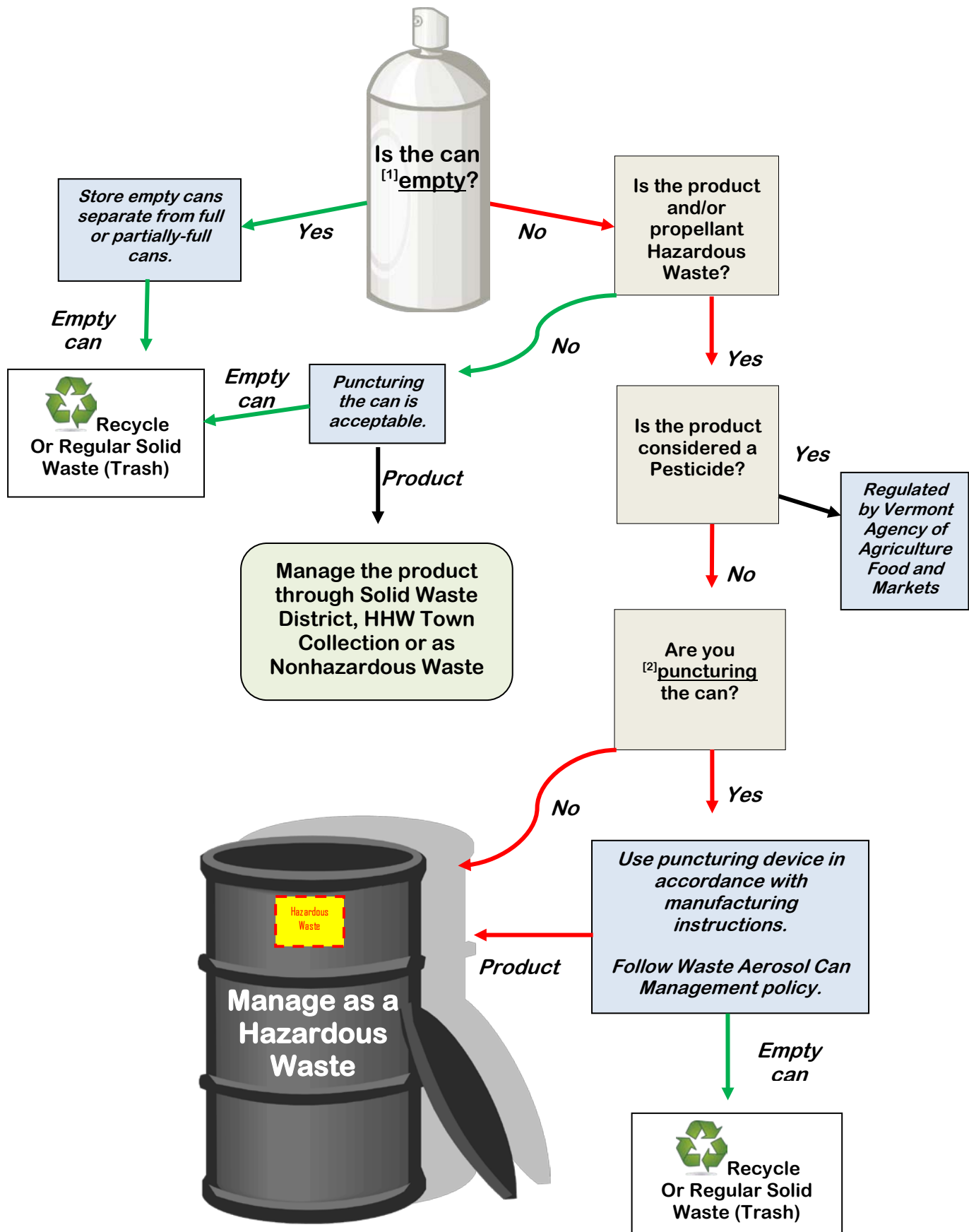
§9 EFFECTIVE DATE



David K. Mears, Commissioner
Department of Environmental Conservation

10/5/11

Date



[1] Aerosol cans are considered empty when the product has been expelled from the can and only residue remains and the pressure in the can is at or very near atmospheric pressure at normal room temperature.

[2] For information concerning puncturing, see Aerosol Can Puncturing Conditions.