

STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

MEMORANDUM

Date: January 4, 2012

To: Health Care Facilities in Colorado

From: Joe Schieffelin, Program Manager
Solid and Hazardous Waste Program
Hazardous Materials and Waste Management Division

Subject: Collection of Hazardous Waste Pharmaceuticals

Question:

Would the hazardous waste regulations allow a generator to combine all medication waste, regardless of associated hazard classes, in the same container while being held in a hospital prior to transportation to a hazardous waste treatment, storage or disposal facility? It is assumed that, prior to transportation, the waste medication would be sorted to meet DOT requirements.

Answer:

Yes, as long as certain conditions are met. Please see discussion below.

Regulatory Background:

The primary concern regarding the mixing together wastes of different waste codes or hazard classes is adverse reactions of incompatible chemicals. The Colorado Hazardous Waste Regulations (6 CCR 1007-3) include some examples of incompatible wastes in Appendix V to Part 265. Examples of incompatible wastes found in Appendix V are concentrated acids and bases, which can potentially generate heat and violent reactions when mixed together.

Because of this concern regarding adverse reactions, 6 CCR 1007-3, Section 265.177 generally prohibits incompatible wastes from being put in the same container, unless certain conditions are met. In particular, generators of hazardous waste who mix or commingle incompatible wastes or materials must ensure that their actions do not:

- (1) Generate extreme heat or pressure, fire or explosion, or violent reaction;
- (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

- (3) Produce uncontrolled flammable fumes, or gases in sufficient quantities to pose a risk of fire or explosions;
- (4) Damage the structural integrity of the device or facility containing the waste; or
- (5) Through other like means threaten human health or the environment. (6 CCR 1007-3, Section 265.17(b)).

Regulatory Opinion:

The Solid and Hazardous Waste Program believes that it is possible for potentially incompatible pharmaceutical wastes generated in a typical health care facility setting (see assumptions below) to be commingled in the same container with minimal risk of adverse reaction. Therefore, if a Colorado health care facility can ensure that none of the above adverse reactions occur, the Solid and Hazardous Waste Program will allow the commingling of appropriately packaged potentially incompatible pharmaceutical wastes in one container.

Assumptions:

In developing the above regulatory opinion, the Solid and Hazardous Waste Program has made several assumptions based on how health care facilities typically manage pharmaceutical waste:

1. This regulatory opinion applies to pharmaceutical wastes generated by a health care facility (hospital, clinic, nursing home, pharmacy, doctor's office, etc.) as a result of carrying out its patient care duties. Typical volumes for these types of wastes are up to a few hundred milligrams for individual capsules or tablets; up to several hundred milliliters for individual liquid pharmaceuticals; up to several hundred grams for individual gels, ointments, lotions, patches or other solid or semi-solid pharmaceuticals. This regulatory opinion does not apply to facilities such as a pharmaceutical manufacturers, distributors, warehouses, reverse distributors, etc., that may generate volumes and types of pharmaceutical waste that are different from those volumes and types of wastes associated with caring for patients in a health care facility setting.
2. Containers used for the collection of different pharmaceutical wastes will be typical of the sizes used by health care facilities to collect pharmaceutical waste (approximately 2-30 gallons), but in no case larger than 55-gallons in size.
3. Free liquids will not be poured into a container and mixed with other types of pharmaceutical wastes.
4. If being put in a container with other pharmaceuticals, liquid pharmaceuticals will be in a non-leaking container or otherwise sealed. A sealed zip top plastic bag may provide adequate separation for items with a potential to leak such as IV bags and tubing.
5. Solid pharmaceutical wastes will not be dissolved in water or otherwise dissolved prior to placing in a container with other pharmaceutical wastes.
6. Laboratory waste, facilities maintenance waste, or other types of non-pharmaceutical waste will not be mixed together in the same container with pharmaceutical wastes.
7. Pharmaceutical wastes will be sorted prior to transportation as necessary to meet DOT requirements. (Sorting for transportations purposes is *not* considered treatment according to 6 CCR 1007-3, Section 260.10)
8. A container holding any quantity of hazardous waste pharmaceuticals will not be disposed of in a non-hazardous solid waste landfill.

If any of the above assumptions do not apply, this regulatory opinion may not apply.

Additional Requirements and Recommendations:

Health care facilities should be aware of the following when collecting pharmaceutical wastes:

1. Facilities must follow all other applicable federal, state, and local requirements regarding the management of medication waste. This includes, but is not limited to, requirements related to DEA controlled substances, OSHA worker health and safety, radiation control, and health care facilities licensing or accreditation.
2. Facilities should check with their local fire protection authority regarding storage requirements for any chemical wastes.
3. To avoid incurring unnecessary costs, facilities should coordinate their pharmaceutical waste collection efforts with their waste disposal companies.